

EXHIBIT A

DECLARATION OF WILLIAM S. COOPER

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND
(Northern Division)**

Baltimore County Branch of the
National Association for the
Advancement of Colored People, *et al.*,

Plaintiffs,

v.

Baltimore County, Maryland, *et al.*,

Defendants.

Civil Action No. LKG-21-3232

DECLARATION OF WILLIAM S. COOPER

I. INTRODUCTION

1. I, William Cooper, am over 18 years of age and am competent to testify. I have a B.A. degree in economics from Davidson College. For more than three decades I have worked as a private consultant serving as a demographic and redistricting expert for civil rights organizations and governmental entities, employed here as an expert for the Plaintiffs. I am compensated at a rate of \$150 per hour for my work.

A. Redistricting Experience

2. I have testified at trial as an expert witness on redistricting and demographics in federal courts in about 45 voting rights cases in 19 states, with most of these lawsuits resulting in changes to statewide legislative boundaries or local election district plans.

3. Since 2011, based in part on my testimony, federal courts have found a Section 2 violation based on the first factor (“Gingles 1”) in *Thornburg v. Gingles*, 478 U.S. 30 (1986) (discussed further below) in the following cases: *Montes v. City of Yakima, Washington*, 40 F.Supp.3d 1377 (E.D. Wash. 2014); *Pope v. Albany County, New York*, 94 F.Supp.3d 302

(N.D.N.Y. 2015); *NAACP v. Ferguson-Florissant School District, Missouri*, 201 F.Supp.3d 1006 (E. D. Mo. 2016); *Thomas v. Bryant*, 366 F.Supp.3d 786 (S.D. Miss. 2019), *Navajo Nation v. San Juan County, Utah*, No. 18-4005 (10th Cir. 2019), and *National Association for the Advancement of Colored People, Spring Valley Branch et al v. East Ramapo Central School District et al*, 462 F. Supp 3d 368 (S.D.N.Y. 2020).

4. In 2016, two redistricting plans that I developed for consent decrees in Section 2 lawsuits in Georgia were adopted – *Georgia NAACP v. Fayette County Bd. of Com'rs*, 118 F. Supp 3d 1338 (N.D. Ga. 2015) and *NAACP v. Emanuel County Bd. of Com'rs*, Civil Action No. 16-0021 (N.D.Ga. 2016).

5. In 2017, I served as a redistricting consultant to the State of Maryland in *Benisek v. Lamone*, 241 F.Supp. 3d 566 (D.Md. 2017) (three-judge-court). I filed a declaration and was deposed in that lawsuit.

6. In 2019, I prepared a consent decree election plan for the Jefferson County, Alabama Board of Education (*James v. Jefferson County Board of Education*). I served as a redistricting consultant to the City of Decatur, Alabama (*Voketz v. City of Decatur*) between 2015 and 2020. I also served as a redistricting consultant to the plaintiffs in *Alabama State NAACP v. City of Pleasant Grove* in 2018 and 2019.

7. In October 2021, I briefly served as a consultant to the city council in Wenatchee, Washington and determined that the 2018 redistricting plan I drew is not malapportioned under the 2020 Census.¹

¹ During the 2010 redistricting cycle, five plans that I developed for local government clients were adopted – Bolivar County, Mississippi; Claiborne County, Mississippi; the City of Grenada, Mississippi; Sussex County, Virginia; and Wenatchee, Washington. I also served as a redistricting consultant in 2011 to the Miami-Dade County Commission and Board of Education.

8. I currently serve as a redistricting consultant to the San Juan County, Utah Commission. On December 14, 2021, the Commission adopted a 3-district commission plan that I developed. On January 4, 2022, the Commission adopted a 5-district school board plan that I developed.

9. On January 5, 2022, I testified at trial in the Northern District of Alabama on behalf of plaintiffs challenging Alabama's 2021 Congressional Plan under Section 2 of the Voting Rights Act – *Caster v. Merrill*, Civil Action No. 21-1356-AMM (N.D. Ala.) (three-judge-court).

10. On January 7, 2022, I filed a declaration in the Northern District of Georgia supporting a preliminary injunction motion in a Section 2 case challenging Georgia's 2021 State House and Senate Plans -- *Alpha Phi Alpha Fraternity v. Raffensberger*.

11. On January 12, 2022, I filed a declaration in the Northern District of Georgia supporting a preliminary injunction motion in a Section 2 case challenging Georgia's 2021 U.S. House Plans – *Pendergrass v. Raffensberger*, Civil Action No. 21-05337-SCJ (N.D. Ga.).

12. I have worked with the ACLU of Maryland on local redistricting plans in Maryland on numerous occasions, including drafting illustrative plans submitted by the ACLU to municipal and county officials in Chestertown (2019), Salisbury (2015), Cambridge (2011), Annapolis (2011), and Somerset County (2011). Usually, we worked collaboratively with government officials, and plans I developed either were adopted outright or influenced the plans ultimately adopted, most recently in Chestertown.

13. I also provided consulting services to the ACLU of Maryland in the mid-2000s regarding prison gerrymandering in Somerset County. This project was an important catalyst leading to the 2010 passage of Maryland Assembly of the State's first-in-the-nation's *No Representation Without Population Act* to provide more accurate representation in government.

By counting persons incarcerated in state prisons in their home districts rather than their place of incarceration for redistricting purposes, this law did away with artificial inflation of voting population in districts where prisons are located, and has since been followed in numerous other states and local governments.

14. While it has been some years since I testified as an expert in federal court in Maryland, I was the demographer for the plaintiffs in *Cane v. Worcester County*, 840 F. Supp. 1081 (D. Md. 1994), a Section 2 case from the Eastern Shore, in which the Court ruled, in part based on my testimony, that the County's election system illegally diluted the Black vote, in violation of the Voting Rights Act. Specifically, I testified, and the District Court found, that Worcester County's Black community was sufficiently large and geographically compact to create a majority in a single-member-district, so as to satisfy the first precondition to Section 2 liability established by the Supreme Court in *Thornburgh v. Gingles*, 478 U.S. 30 (1986). Although subject to several appeals specifically challenging my compactness finding, the Fourth Circuit ultimately affirmed both the liability and remedy rulings, and the Supreme Court twice denied certiorari.

15. For more information on my testimony as an expert witness and experience preparing and assessing proposed redistricting maps for Section 2 litigation and other efforts to promote compliance with the Voting Rights Act of 1965, see the summary of my redistricting work in **Exhibit A**.

B. Purpose of Declaration

16. The attorneys for the Plaintiffs in this case asked me to determine two things:

- (a) Whether it is possible to create at least two reasonably compact and contiguous districts with a Black² voting-age majority population (“BVAP”) under a seven single-member district plan for the Baltimore County Council, so as to satisfy *Gingles* 1; and
- (b) To compare measures of socio-economic status for Blacks and non-Hispanic Whites in Baltimore County, as reported in the *2019 American Community Survey 1-Year Estimates* dataset produced by the U.S. Census Bureau (“Census Bureau”), so as to determine if Black residents of Baltimore County suffer continuing effects of past discrimination in their socio-economic status, a factor identified by the Senate as significant in assessing liability under the Voting Rights Act.

C. Expert Summary Conclusions:

17. Based on my analysis, my conclusions, which I explain below, are as follows:

- Using Baltimore County’s established election structure of seven single-member districts, Black residents in Baltimore County are sufficiently numerous and geographically compact to easily comprise two westside Council districts with majority-Black voting age populations, commensurate with their 32% presence in the County population.

- Further, beyond these two majority-Black districts, BIPOC³ residents as a whole are sufficient in number and geographic concentration to create a third “coalition” or “influence”

² In this declaration, “Black” and “African American” are synonymous, as are “Latino” and “Hispanic.” White and non-Hispanic White are also synonymous.

Unless otherwise noted, “Black” means Any Part Black. “BVAP” means Any Part Black voting age population, i.e. voting age persons who self-identified in the 2020 Census as single-race Black or Black plus one or more other races, including Black Hispanics.

It is my understanding that following the U.S. Supreme Court decision in *Georgia v. Ashcroft*, 539 U.S. 461 (2003), the “Any Part” definition is an appropriate Census classification to use in most Section 2 cases.

³ “BIPOC” means Black, Indigenous, and People of Color, and my use of the term “minority” throughout refers to populations not in the majority. My primary focus on a Black threshold VAP-majority is not meant to imply that Black voters in Baltimore County are not part of a larger community of interest and voting coalition that includes all BIPOC voters.

district comprising a significant bloc of Black, Latino, and Asian voting age County residents.

(See Plaintiffs' Proposed Plans 1 and 5 *infra*)

- As reported in the 2019 American Community Survey, in Baltimore County, non-Hispanic White people significantly outpace Black people across most key indicators of socio-economic well-being.

D. Methodology and Sources

18. For the calculation of ideal population size, as it pertains to districts in the election plans I review, I rely on the 2020 prison-adjusted dataset prepared by the Maryland Department of Planning, as required by the *No Representation Without Population Act*.⁴

19. There are no state prisons in Baltimore County and just 2,138 prisoners on April 1, 2020 are listed as having a Baltimore County address.⁵ The addition of these prisoners to the adjusted population adds 0.25% to the 2020 total population – from 854,535 under the 2020 Census to 856,673 after the reallocation of prisoners. Given this *de minimis* difference of 0.25%, throughout this declaration I refer to U.S. Census Bureau population counts from the PL94-171 file of the 2020 Census and citizenship statistics from the American Community Survey (except for in district-by-district deviation calculations, in which I use the prison-adjusted dataset).

20. **Exhibit B** describes the sources and methodology I have employed in the preparation of this report. Briefly, I used the *Maptitude for Redistricting* software program as well as data and shapefiles from the U.S. Census Bureau.

⁴ <https://redistricting.maryland.gov/Pages/data.aspx>

⁵ Source: <https://redistricting.maryland.gov/Documents/Data/PopulationAdjustmentFinal.pdf>

E. Organization of Declaration

21. The remainder of this declaration is organized as follows: **Section II** reviews Baltimore County 2000-2020 demographics. **Section III** reviews the adopted 2021 County Council Plan (“Council Plan” or “2021 Council Plan”). **Section IV** presents two proposed plans that I prepared, based on the 2020 Census. Both proposed plans contain an additional second majority-Black district. And both proposed plans were presented to the County Council in November 2021. Finally, **Section V** provides information about Baltimore County’s socioeconomic profile, including disparities in socioeconomic status between the County’s Black and white residents.

II. DEMOGRAPHIC PROFILE OF BALTIMORE COUNTY

A. Location and Characteristics of Baltimore County

22. Baltimore County is a densely populated suburban county that encircles the City of Baltimore, which is a separate governmental entity treated as equivalent to a county in Maryland. Baltimore County is geographically large (the third largest in Maryland, in terms of land area and population) covering an area of 682 square miles.

23. Baltimore County is highly unusual, because it has no incorporated municipalities and no other localized municipal governments or elected municipal officials, meaning all County residents are represented only by the County Councilmember elected from the district in which they live, and the County Executive, who is elected at large. This means even large Baltimore County communities – such as the county seat of Towson – are merely “census designated places”⁶ (“CDPs”) rather than actual municipalities.

⁶ The Census Bureau defines a census designated place as “statistical equivalents of incorporated places and represent unincorporated communities that do not have a legally defined boundary or an active, functioning governmental structure. Examples of CDPs include unincorporated

24. In considering election opportunities for Black voters and candidates, Baltimore County's lack of municipalities and elected municipal officials is significant. City or other local municipal councils are often a key stepping-stone to countywide office, especially for voters and candidates from racial minority groups that have historically been underrepresented in government. By eliminating these opportunities entirely, Baltimore County's governmental structure makes it harder for Black voters to influence elections and gain self-representation. If, for example, some of the west-County census designated places, such as Woodlawn, Randallstown, Milford Mill, Lochearn, and Owings Mills – all of which now are majority Black in voting age population – were incorporated municipalities, there would be more opportunities for Black voters to elect Black candidates to offices at the local level. By maintaining a government only at the County level, the White countywide majority generally remains able to defeat Black candidates of choice.

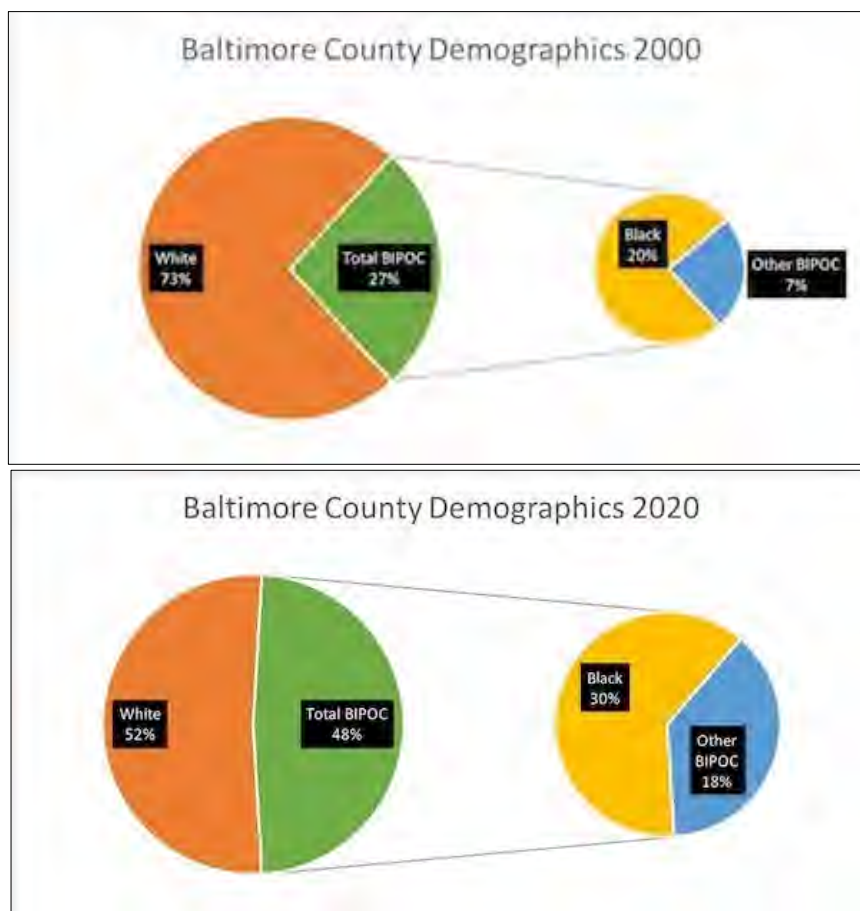
B. 2020 Census – Population by Race and Ethnicity

25. According to the 2020 Census, Baltimore County has a total population of 854,535, of whom 669,511 are of voting age. At 51.9%, non-Hispanic Whites (“NH Whites”) constitute the largest racial/ethnic category in the county. African Americans, at 32.2% Any Part Black (“AP Black”), represent the largest minority population, followed by Latinos (7.2%), who may be of any race, and NH Asian-Americans (6.3%). The 2020 total Black, Indigenous, People of Color (“BIPOC”) population in Baltimore County is 48.1% – consisting of all persons who are not single-race non-Hispanic White.

communities, planned communities, military installments, university towns, resort towns, etc.”
Source: <https://www.census.gov/programs-surveys/bas/information/cdp.html>

26. As illustrated in **Figure 1**, between 2000 and 2020, Baltimore County's population diversified significantly, with the BIPOC population growing from 27% in 2000 to 48% in 2020. During the same period, the single-race Black population has increased from 20% to 30% (32% AP Black). Whereas the County's non-Hispanic White population was 73% in 2000, by 2020 it had declined to 52%.

Figure 1 - Demographic Change in Baltimore County 2000-2020



27. Specifics of the County's demographic population changes from 2000 to 2020 are shown in **Figure 2**. Although Baltimore County's overall population grew by more than 100,000 during this period, from 754,292 to 854,535 persons, the County's non-Hispanic White population fell by even more – 110,627 persons – representing a *decline* of 20%. Meanwhile, the AP Black population *grew* over the same period, adding 118,814 persons, or 75.9%. The total

BIPOC population (including Black, Latino, Asian, and multi-racial populations) grew from 200,402 persons in 2000 to 411,272 persons in 2020, an increase of 210,870 persons or 105%.

Figure 2

**Baltimore County – 2000 Census to 2020 Census
Population by Race and Ethnicity**

	2000 Population	Percent	2010 Population	Percent	2020 Population	Percent	2000 - 2020 Change	% 2000 - 2020 Change
Total Population	754,292	100.00%	805,029	100.00	854,535	100.00%	100,243	13.29%
NH White*	553,890	73.43%	504,556	62.68%	443,263	51.87%	-110,627	-19.97%
Total Minority(BIPOC)	200,402	26.57%	300,473	37.32%	411,272	48.13%	210,870	105.22%
Latino	13,774	1.83%	33,735	4.19%	61,492	7.20%	47,718	346.44%
NH Black*	150,456	19.95%	206,913	25.70%	252,724	29.57%	102,268	67.97%
NH Asian*	23,845	3.16%	39,865	4.95%	54,701	6.40%	30,856	129.40%
NH Hawaiian and PI*	195	0.03%	255	0.03%	252	0.03%	57	29.23%
NH Indigenous*	1,769	0.23%	2,107	0.26%	1,942	0.23%	173	9.78%
NH Other*	1,016	0.13%	1,445	0.18%	4,461	0.52%	3,445	339.07%
NH Two or More Races*	9,347	1.24%	16,153	2.01%	35,700	4.18%	26,353	281.94%
SR Black (Single-race Black)	151,600	20.10%	209,738	26.05%	255,793	29.93%	104,193	68.73%
AP Black (Any Part Black)	156,546	20.75%	220,378	27.38%	275,360	32.22%	118,814	75.90%

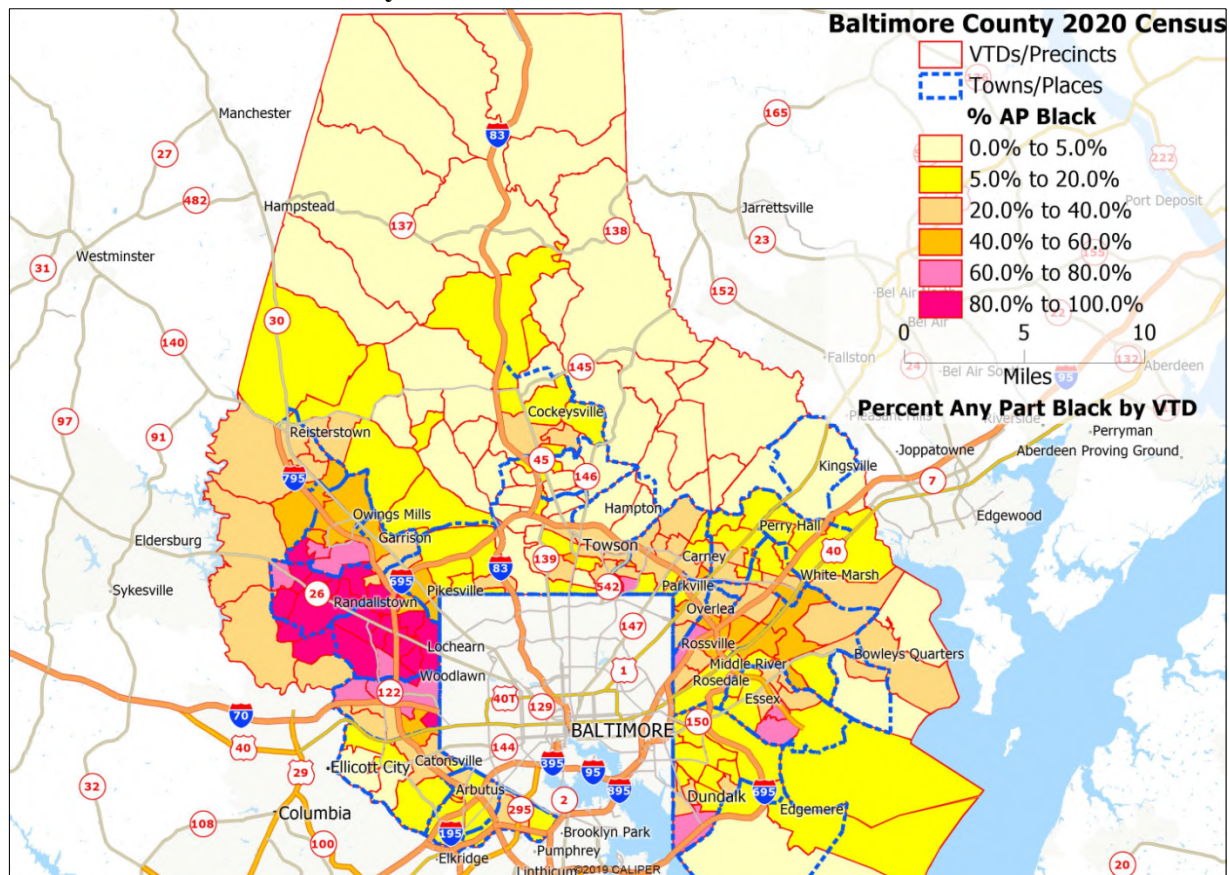
*Single-race, non-Hispanic

C. Geographic Distribution of the Black Population

28. The Black population in Baltimore County is concentrated in the western areas of the County, with some significant BIPOC population also to the northeast of the border with the City. The map in **Figure 3** shows the geographic distribution of the Black population in Baltimore County, based on 2020 Census voting tabulation districts (“VTDs”)⁷. The bulk of the County’s Black population lives in geographically compact areas running throughout western Baltimore County. **Exhibit C-1** is a higher resolution version of Figure 3.

⁷ “VTD” is a Census Bureau term meaning “voting tabulation district.” VTDs generally correspond to precincts. In Baltimore County, there are 237 VTDs, ranging in population size from 6 persons to 11,576 –193 of the VTDs have populations over 1,000 persons.

Figure 3
Geographic Distribution of the Black Population in Baltimore County
By 2020 Census VTD



29. Several westside census designated places depicted on the map, including Randallstown, Woodlawn, Lochearn, Milford Mill and Owings Mills, are majority Black in population. **Exhibit C-2** is a table with population by race and ethnicity for the 32 census designated places in Baltimore.

D. Voting Age and Citizen Voting Age by Race and Ethnicity

30. As shown in **Figure 4**, African Americans in Baltimore County constitute a slightly smaller percentage of the voting age population (VAP) than they do of the total population – amounting to 30.39% of the voting age population as compared to 32.2% of the general population. Specifically, according to the 2020 Census, Baltimore County has a total VAP of 669,511– of whom 203,447 (30.39%) are AP Black. The NH White VAP is 369,566 (55.20%).

Figure 4

**Baltimore County – 2020 Voting Age Population
& 2019 Estimated Citizen Voting Age Population
By Race and Ethnicity⁸**

	2020 VAP	2020 VAP Percent	2019 CVAP Percent
Total	669,511	100.00%	100.00%
NH White 18+	369,566	55.20%	68.5 %
Total BIPOC18+	299,945	44.80%	31.5%
Latino 18+	40,189	6.00%	2.2%
Single-race Asian (Including Asian Hispanics)18+	42,424	6.34%	4.3%
Single-race Black (Including Black Hispanics)18+	192,662	28.78%	26.7%
Any Part Black (Including Black Hispanics) 18+	203,447	30.39%	NA

31. The rightmost column in **Figure 4** reveals that the NH White population in Baltimore County comprises a significantly higher percentage of the citizen voting age population (“CVAP”) – 68.50% -- than the corresponding voting age population, owing to higher non-citizenship rates among the BIPOC voting age population. CVAP percentages for the AP Black VAP are not available in the 1-year 2019 ACS. However, for all ages, AP Black citizens represent 31.49% of all citizens in Baltimore County (261,367 of 827, 370.).⁹

32. In Baltimore County, BIPOC CVAP (31.5%) is considerably lower than BIPOC VAP (44.80%). This 13-percentage point gap between BIPOC VAP to BIPOC CVAP will likely narrow over the course of the decade, as the younger citizen BIPOC population attains voting age. For all ages, the BIPOC citizenship rate is 41.79%, according to the 1-year 2019 ACS.¹⁰

⁸ Sources: **PL94-171 Redistricting File** (Census 2020); **Table S2901 -- CITIZEN, VOTING-AGE POPULATION BY SELECTED CHARACTERISTICS** (1-year 2019 ACS)
<https://data.census.gov/cedsci/table?q=S2901&g=05000000US24005>

⁹ Calculated from **Exhibit G-2, p. 4** (*infra*), as reported in the 1-Year ACS Table S0201, published by the U.S. Census Bureau.

¹⁰ Ibid.

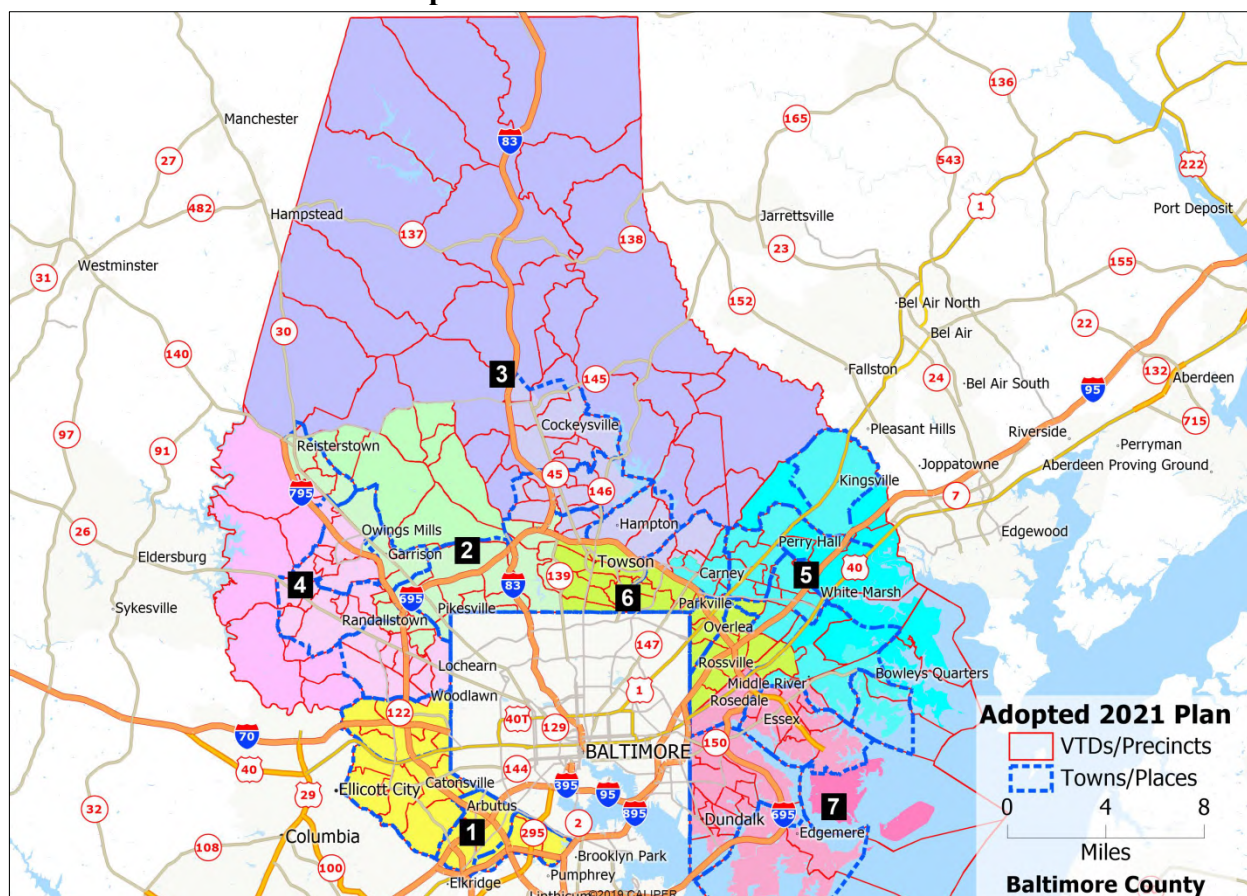
III. THE CHALLENGED COUNCIL REDISTRICTING PLAN

33. Under the redistricting plan adopted by the Baltimore County Council on December 20, 2021, each of the seven Council members will be elected from a single-member district. Based on the prison-adjusted 2020 Census dataset, the ideal district size for each of the seven districts within the county is 122,382 (856,673 divided by 7).

34. A map of the 2021 Council Plan is shown in **Figure 5**. A higher resolution version of the Figure 5 map is in **Exhibit D-1**. **Exhibit D-2** contains a set of maps that zoom on each of the Council Plan districts.

Figure 5

Adopted 2021 Council Plan



35. The table in **Figure 6** shows 2020 summary population statistics for the Council Plan. **Exhibit D-3** contains detailed 2020 population statistics by district.

Figure 6

2021 Council Plan Population Summary

District	Prison Adjusted Pop.	% Dev.	Population	18+ Pop	% 18+ AP Black	% 18+ NH White	% 18+ BIPOC
1	122,391	0.01%	122,074	95,419	29.71%	49.50%	50.50%
2	118,343	-3.30%	118,145	91,675	31.18%	55.55%	44.45%
3	119,477	-2.37%	119,377	94,192	8.09%	77.58%	22.42%
4	119,487	-2.37%	119,068	93,489	74.74%	16.31%	83.69%
5	121,237	-0.94%	121,023	94,526	18.77%	66.12%	33.88%
6	128,310	4.84%	127,988	102,680	31.20%	54.71%	45.29%
7	127,428	4.12%	126,860	97,530	19.72%	66.04%	33.96%

36. The overall deviation from the ideal district size for the seven districts in the Council Plan – combining the largest positive deviation from ideal size with the largest negative deviation – is 8.14%; this meets population equality requirements under the Constitution that presumptively allow combined deviations up to 10%.

37. Unlike the Plaintiff’s Proposed Plans discussed below, however, the Council Plan is highly problematic in that it fails to prevent minority vote dilution. That is because only one district in the Council Plan, District 4, includes a majority Black voting age population, when it is readily possible to create two substantial majority Black districts because the Black population on the western side of the County is “large and geographically compact”.

38. Instead of allowing the County’s significant Black population to create majorities in two districts, the Council Plan “packs”¹¹ an excessively high share of Black voters into a single district, District 4, comprising 76.1% of the District’s general population and 74.7% of the District’s voting age population. Only 16.3% of the voting-age population in the Council Plan’s District 4 is white, meaning the Black VAP is over 58 percentage points higher than the NH White VAP. Even a 60% Black voting age population in a single member district could only be

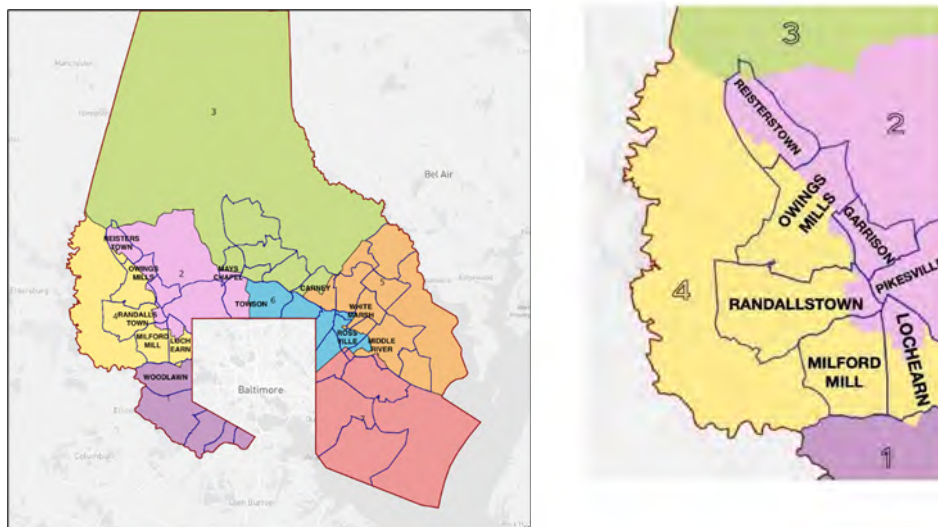
¹¹ Packing” describes election districts where a minority population is unnecessarily concentrated, resulting in an overall dilution of minority voting strength in the voting plan.

justified today in a place where a high percentage of the minority VAP at issue is non-citizen. But citizenship is not an issue for the Black population in Baltimore County, where Black CVAP closely tracks Black VAP. Thus, the Adopted Plan’s inclusion of nearly 75% Black VAP in District 4 is clearly unnecessary.

39. Also, as illustrated in the **Figure 7** detail map, the Council Plan “cracks”¹² certain majority-Black communities, including Randallstown (84.6% Black), Milford Mill (86.3% Black), Lochearn (83.7% Black), and Owings Mills (63.2% Black), between majority-Black District 4 and white-majority District 2. A total population of 22,950 persons (66.6% Black) is shifted into majority-white District 2 from the above four majority-Black towns.

Figure 7

**2021 Council Plan
Detail of Black Community Cracking Among Districts**



40. In addition, racially diverse neighborhoods (pop. 22,153 -- 37.6% Black) in Reisterstown are drawn into majority-white District 2. Taken together, the Reisterstown shift and

¹² “Cracking” describes election plans with one or more districts that fragment or divide the minority population, also resulting in an overall dilution of minority voting strength in the voting plan.

the cracking of the four majority-Black towns add up to a total population of 45,463 (52.4% Black) – enough to form about one-third of a second majority-Black district.

41. At the same time, the Council Plan keeps the adjacent majority-White community of Pikesville (67.3% White) wholly in District 2. In combination with the District 4 packing, division of majority-Black or significantly Black communities in the Council Plan results in the Plan's failure to create a second majority-Black district. In fact, the highest share of AP Black voting age population in any districts except District 4 in the Council Plan is 31.2%, in Districts 1 and 6. And in every one of the districts in the Council Plan except District 4, the white voting age population outnumbers the Black by over 19 percentage points. Thus, in six of the seven districts in the Council Plan, a white majority voting as a bloc would retain power to defeat the choices of a cohesive Black community of voters.

V. PLAINTIFFS' PROPOSED PLANS

42. Following release of Census data in mid-August, I worked with the Plaintiffs and their counsel to develop illustrative redistricting plans showing how a Baltimore County Council plan with seven single-member districts could be drawn, consistently with all traditional redistricting principles, to include two majority-Black districts among the seven.

43. Over the period from late August through October, I prepared five different illustrative plans with two majority-Black districts, each of which was submitted by the Plaintiffs to the Baltimore County officials involved in the redistricting process to show there were several ways to create a second majority-Black district. Each of these five plans adheres to all traditional redistricting principles, including that they (i) satisfy Constitutional one-person one-vote requirements, (ii) are reasonably shaped, compact and contiguous, (iii) respect communities of interest, and (iv) prevent dilution of minority voting strength.

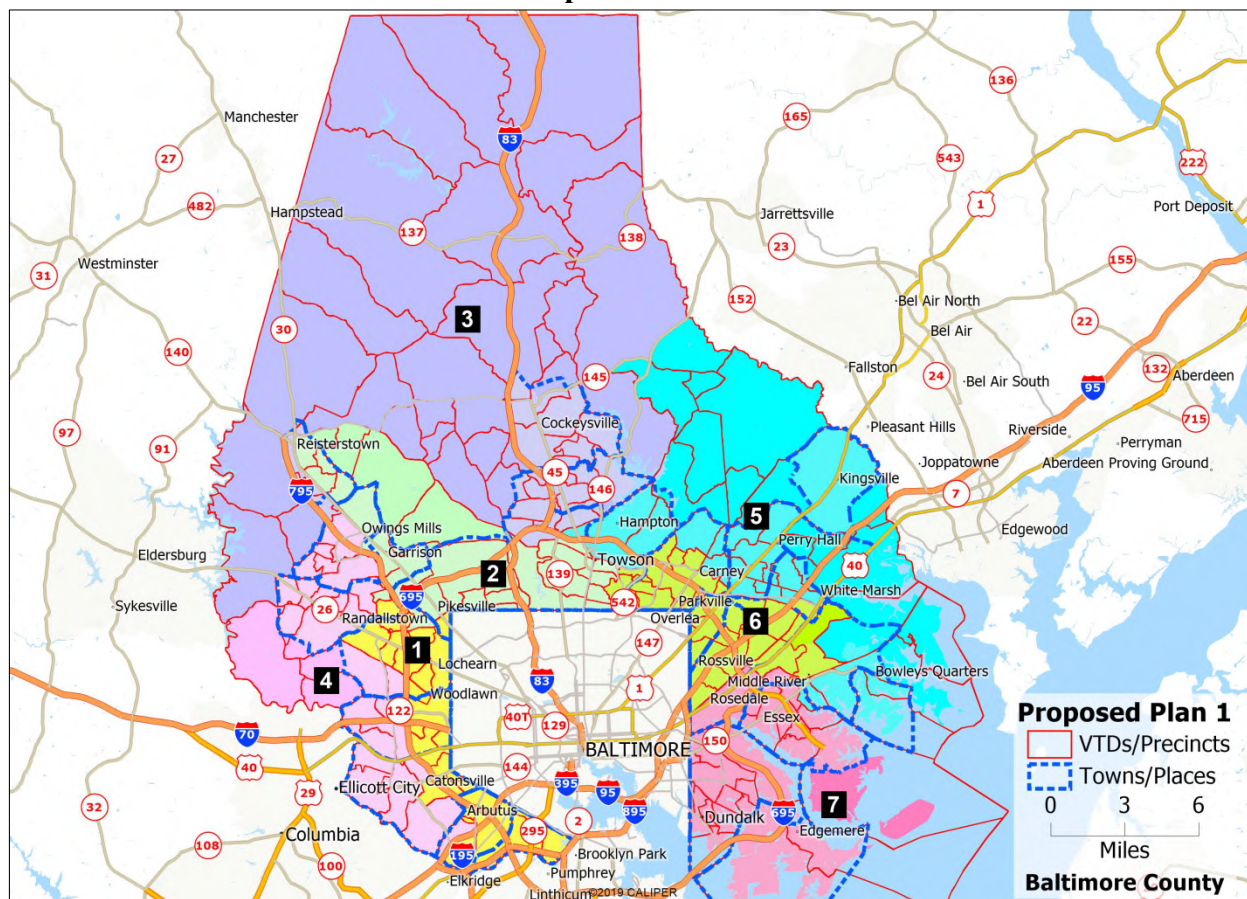
44. For purposes of this action, I will focus attention on Plan 1 and Plan 5 submitted to the Council. Both of these Proposed Plans create two districts that are majority Black in voting age population by at least 20 percentage points over non-Hispanic White VAP. This 20+ percentage point Black-White VAP margin in the proposed majority-Black districts is significantly wider than in typical illustrative majority-minority districts I have drawn in Section 2 cases where courts relied upon my Gingles 1 analysis, suggesting that it is strongly protective of Black voting opportunities.

45. Both Proposed Plans also include a third “influence” district where the population is roughly split between BIPOC and White residents.¹³ Overall, both plans recognize the County’s diversifying population and afford all voters fair and realistic opportunities to elect representatives of their choice.

A. Plaintiffs Proposed Plan 1

46. The map in **Figure 8** shows Plaintiffs Proposed Plan 1. A higher resolution version of the Figure 8 map is in **Exhibit E-1**. **Exhibit E-2** contains a set of maps that zoom on each of the districts in Proposed Plan 1.

¹³ District 1 in Proposed Plan 1 and District 6 in Proposed Plan 5.

Figure 8**Plaintiffs' Proposed Plan 1**

47. In Proposed Plan 1, majority-Black District 1 follows the city limits of Baltimore, encompassing all of Baltimore Highlands and Landsdowne, then north generally along I-695 to include whole precincts in Randallstown and Pikesville. Majority-Black District 4 follows District 1 from the south and east, with the Carroll and Howard County lines forming its western border. In the north, District 4 extends east to Owings Mills, which is split along precinct lines and shared with District 2 and District 3.

48. **Figure 9** shows summary population statistics for Proposed Plan 1. **Exhibit E-3** contains detailed 2020 population statistics by district.

Figure 9

Plaintiffs' Proposed Plan 1 Population Summary							
District	Prison Adjusted Pop.	% Dev.	Population	18+ Pop	% 18+ AP Black	% 18+ NH White	% 18+ BIPOC
1	123,487	0.90%	123,009	95,862	54.83%	31.05%	68.95%
2	124,871	2.03%	124,715	98,207	24.26%	62.03%	37.97%
3	119,713	-2.18%	119,607	94,362	12.36%	72.37%	27.63%
4	118,817	-2.91%	118,532	93,414	53.90%	31.36%	68.64%
5	124,615	1.82%	124,450	99,050	13.49%	72.65%	27.35%
6	120,554	-1.49%	120,152	92,918	36.10%	48.96%	51.04%
7	1246,16	1.83%	124,070	95,698	18.95%	66.72%	33.28%

49. The overall deviation (positive plus negative) from the ideal district size for the seven districts in this Plan is 4.94%. The two districts with majority Black voting age population are District 1 which is 54.8% BVAP (31.0% NH White VAP), and District 4 which is 53.9% BVAP (31.4% NH White VAP).

50. In both of these districts, the Black VAP is over 22 percentage points higher than the White VAP, ensuring that a cohesive Black community of voters would have a fair and realistic opportunity to elect representatives of their choice, in keeping with the requirements of the Voting Rights Act.

51. In addition, Proposed Plan 1 includes a third influence district that is split nearly evenly between BIPOC and the NH White voting age populations: District 6 is 51.0% in total BIPOC VAP and 49.0% in non-Hispanic White VAP.

52. Proposed Plan 1 can also be viewed online in detail on the *Dave's Redistricting Application* (DRA) website via the link below:

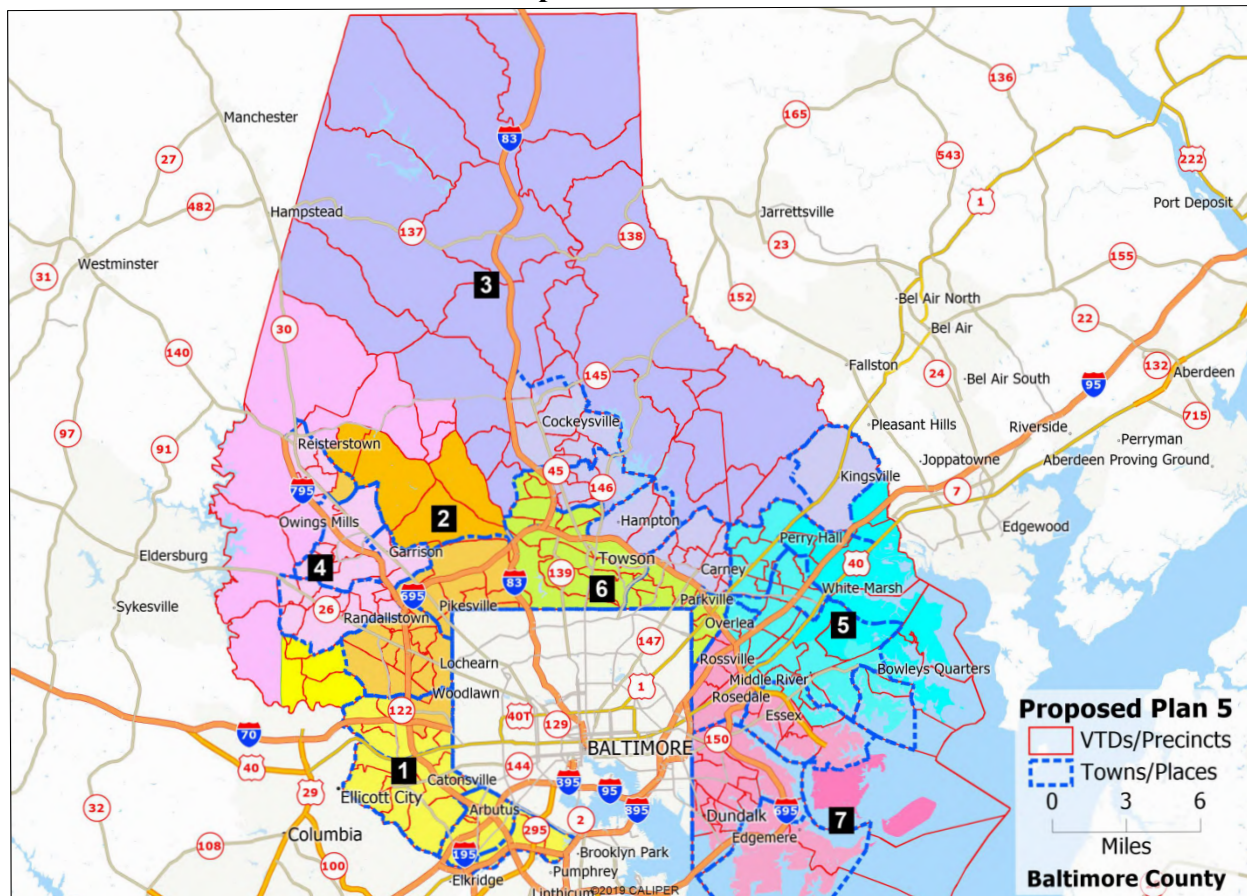
<https://davesredistricting.org/join/326d6025-b344-44c4-b75f-4f0767cab34a>

B. Plaintiffs Proposed Plan 5

53. **Figure 10** shows the map for Plaintiffs' Proposed Plan 5. A higher resolution version of the Figure 10 map is in **Exhibit F-1**. **Exhibit F-2** contains a set of maps that zoom on each of the districts in Proposed Plan 5.

Figure 10

Plaintiffs' Proposed Plan 5



54. Proposed Plan 5 is drawn to prioritize keeping communities and towns whole. Just three CDPs are split -- Woodlawn - D 1 and D 2; Reisterstown - D 2 and D 4; and Essex - D 5 and D 7.

55. In Proposed Plan 5, majority-Black District 2 encompasses Lochearn, Millford Mill, and Pikesville. Parts of Woodlawn and Reisterstown are also in District 2. Majority-Black District 4 includes all of Garrison, Owings Mills, and Randallstown.

56. **Figure 11** shows summary population statistics for Proposed Plan 5. **Exhibit F-3** contains detailed 2020 population statistics by district.

Figure 11

Plaintiffs' Proposed Plan 5 -- Population Summary

District	Prison Adjusted Pop.	% Dev.	Population	18+ Pop	% 18+ AP Black	% 18+ NH White	% 18+ BIPOC
1	117,582	-3.92%	117,299	91,822	27.63%	51.39%	48.61%
2	118,013	-3.57%	117,653	91,368	55.00%	35.01%	64.99%
3	124,905	2.06%	124,772	98,770	10.19%	76.27%	23.73%
4	116,414	-4.88%	116,127	91,106	56.03%	31.55%	68.45%
5	127,792	4.42%	127,490	98,805	22.97%	61.11%	38.89%
6	123,477	0.89%	123,256	98,894	22.39%	64.21%	35.79%
7	128,490	4.99%	127,938	98,746	22.16%	63.22%	36.78%

57. The overall deviation from the ideal district size for the seven districts in this Plan is 9.87%, satisfying Constitutional population equality requirements. The two districts with majority Black voting age population are District 2, which is 55.0% BVAP (35.0% NH White VAP), and District 4, which is 56.0% BVAP (31.5% NH White VAP).

58. In both of these districts, the Black VAP is very significant compared to White VAP, with District 2 20 percentage points higher and District 4 24.5 percentage points higher. Both districts ensure that a cohesive Black community of voters would have a fair and realistic opportunity to elect representatives of their choice, in keeping with the requirements of the Voting Rights Act.

59. In addition, Proposed Plan 5 includes a third district that is split nearly evenly between BIPOC and White voting age populations, District 1, which is 48.6% in BIPOC VAP and 51.4% in non-Hispanic White VAP.

60. Proposed Plan 5 can also be viewed online in detail on the *Dave's Redistricting Application* (DRA) website via the link below:

<https://davesredistricting.org/join/842017de-6691-4036-b180-ee8f02cb8eee>

C. Supplemental Plan Information

(a) Compactness Measures

61. **Figure 12** reports compactness scores generated by Maptitude for the 2021 Council Plan and Proposed Plans 1 and 5. The table summarizes the Reock¹⁴ and Polsby-Popper¹⁵ scores – the two most widely-referenced measures of compactness. Higher scores indicate higher compactness.

Figure 12

Compactness Comparison – Proposed Plans 1 and 5 vis-à-vis 2021 Council Plan

	Reock		Polsby-Popper	
	Mean	Low	Mean	Low
2021 Council Plan	.45	.25	.42	.26
Proposed Plan 1	.36	.20	.33	.18
Proposed Plan 5	.39	.23	.37	.20

62. There is no bright line rule on what constitutes an acceptable compactness score. Acceptable scores vary widely depending on the jurisdiction and type of plan at issue. In my opinion, the districts in the 2021 Council Plan and both of the Plaintiffs' Proposed Plans are reasonably shaped and compact – and clearly within the normal range for compactness.

¹⁴"The Reock test is an area-based measure that compares each district to a circle, which is considered to be the most compact shape possible. For each district, the Reock test computes the ratio of the area of the district to the area of the minimum enclosing circle for the district. The measure is always between 0 and 1, with 1 being the most compact. The Reock test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan." *Maptitude For Redistricting* software documentation (authored by the Caliper Corporation).

¹⁵ The Polsby-Popper test computes the ratio of the district area to the area of a circle with the same perimeter: $4\pi\text{Area}/(\text{Perimeter}^2)$. The measure is always between 0 and 1, with 1 being the most compact. The Polsby-Popper test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan. *Maptitude For Redistricting* software documentation (authored by the Caliper Corporation).

(b) Political Subdivision Splits

63. As shown in **Figure 13**, the Council Plan splits 5 VTDs and 15 CDPs. Proposed Plan 1 is drawn entirely at the VTD-level, so there are no split VTDs. Both the Council Plan and Proposed Plan 1 prioritize keeping VTDs intact, but in doing so CDP boundary lines are crossed by districts, resulting in 15 split CDPs in the two plans.

64. On the other hand, Proposed Plan 5 prioritizes keeping communities intact. All but three CDPs are in a single district. Because VTD boundaries do not always follow town boundaries, there are 22 VTDs split in Proposed Plan 5.

Figure 13**VTD and Municipal Splits – Illustrative Plan vis-à-vis 2021 Plan**

	2020 VTD Splits	Census Designated Place Splits
2021 Council Plan	5	15
Proposed Plan 1	0	15
Proposed Plan 5	22	3

(c) Incumbents

65. Upon information and belief, all incumbents who are not retiring this year are placed in separate districts under Proposed Plan 1 and Proposed Plan 5.

V. BALTIMORE COUNTY'S SOCIO-ECONOMIC PROFILE

A. Countywide

66. As detailed below, non-Hispanic Whites in Baltimore County consistently outpace African Americans across a broad range of economic measures, as reported in the *2019 American Community Survey* (“ACS”).¹⁶ These disparities are summarized below and depicted with further detail in the charts found in **Exhibit G-1**, using data drawn from the *2019 ACS*.¹⁷ The *ACS* is an ongoing survey conducted by the U.S. Census Bureau that gathers information annually about jobs and employment, educational attainment, housing, and other topics. **Exhibit G-2** contains the complete dataset underlying the charts, published by the U.S. Census Bureau.¹⁸

a) Education

67. African American educational attainment in Baltimore County is roughly comparable to their White cohorts through high school—26.6% of Blacks over the age of 25 have a high school degree as their highest level of education, compared to 25.5% of whites. However African Americans fall behind at the college level, with 33.4% holding a college degree, compared to 43.8% of whites. See **Exhibit G-1 at 5**.

b) Income

68. African Americans in the County experience a poverty rate higher than for whites – 9.9% of Blacks live below the poverty line, versus 7.3% of whites. For children, these

¹⁶ In this section, the term “White” refers to non-Hispanic White. The term “Black” or “African American” refers to Any Part Black, including Black Hispanics.

¹⁷ The 1-year 2019 ACS is the most current available. The 2020 ACS was canceled due to the COVID-19 pandemic.

¹⁸ <https://data.census.gov/cedsci/table?text=s0201&t=-0A%20-%20All%20available%20non-Hispanic%20Origin%3A005%20-%20Black%20or%20African%20American%20alone%20or%20in%20combination%20with%20one%20or%20more%20other%20races&g=0500000US24005&y=2019&tid=ACSSPPIY2019.S0201>

disparities are worse: 11.7% of Black children live in poverty, compared to 6.2% of White children. *See Exhibit G-1 at 22.*

69. Black family households are two-thirds more likely (6.7%) to live in poverty than do White families (4.0%). **Exhibit G-1 at 19.**

70. Black median household income is \$67,457— about 78% of the \$85,929 median income of White households. *See Exhibit G-1 at 14.*

71. Black family households exhibit an even greater median income disparity compared to White family households – \$76,726 for Black median family household income, compared to \$111,325 for White family households, meaning Black family income averages 69% that of White families. *See Exhibit G-1 at 16.*

72. Black per capita income is \$31,133, which is about 63% of the \$49,339 White per capita income. *See Exhibit G-1 at 17.*

73. About one in seven Black households relies on food stamps —14.9% of Black households participate in the Supplemental Nutrition Assistance Program (SNAP), compared to one in 18 White households – 5.7%. *See Exhibit G-1 at 15.*

c) Employment

74. Although a larger percentage of African Americans (72.0%) work in the labor force than whites (63.4%), the earnings they bring home are consistently less. Data show that Black workers, both male and female, employed full time, year-round, earn substantially less money than do their White counterparts. For Black men among this group, average income (\$57,849) is dramatically less than it is for White men (\$98,619), meaning Black men average just 59 cents for every dollar earned by White men. *See Exhibit G-2 at 8.*

75. The Black unemployment rate (for the working age population ages 16-64 – expressed as a percent of the civilian labor force) – is higher than for whites. At the time of the survey, 5.8% of working-age African Americans were unemployed, compared to a 3.3% rate for the White workforce. *See Exhibit G-1 at 11.*

76. More than twice as many Black Baltimore Countians (7.6%) lack health insurance than do whites (3.3%), an especially acute issue during the pandemic. *See Exhibit G-1 at 18.*

d) Housing and Transportation

77. More than half of Black households in the County (54.2%) rent their homes, versus just 23.6% of White households who are renters. *See Exhibit G-1 at 21.*

78. More than twice as many Black as White households have no access to a vehicle: 12.5% of Black households lack a vehicle, compared to 5.9% of White households. *See Exhibit G-1 at 23.*

B. Census Designated Places

79. For additional socioeconomic information, I have prepared charts and tables for 24 Baltimore County census designated places with significant minority populations. The charts available at the link below are based on the five-year 2015-2019 American Community Survey and include data for the SR Black population, as well as Latino population.¹⁹

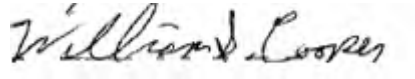
http://www.fairdata2000.com/ACS_2015_19/Baltimore_County/

¹⁹ The 2019 1-year ACS is not available for counties and places with populations under 65,000. The 5-year 2015-2019 ACS reports SR Black socioeconomic estimates only. AP Black estimates are not published in the 5-year ACS

I declare under penalty of perjury that the foregoing is true and correct according to the best of my knowledge, information, and belief.

Executed on:

Date: January 18, 2022

A handwritten signature in cursive script, appearing to read "William S. Cooper", written in black ink on a light-colored background.

William S. Cooper

COOPER DECLARATION

EXHIBIT A

December 31, 2021

William S. Cooper
P.O. Box 16066
Bristol, VA 24209
276-669-8567
bcooper@msn.com

Summary of Redistricting Work

I have a B.A. in Economics from Davidson College in Davidson, North Carolina.

Since 1986, I have prepared proposed redistricting maps of approximately 750 jurisdictions for Section 2 litigation, Section 5 comment letters, and for use in other efforts to promote compliance with the Voting Rights Act of 1965. I have analyzed and prepared election plans in over 100 of these jurisdictions for two or more of the decennial censuses – either as part of concurrent legislative reapportionments or, retrospectively, in relation to litigation involving many of the cases listed below.

From 1986 to 2020, I have prepared election plans for Section 2 litigation in Alabama, Connecticut, Florida, Georgia, Louisiana, Maryland, Mississippi, Missouri, Montana, Nebraska, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, and Wyoming.

Post-2010 Redistricting Experience

Since the release of the 2010 Census in February 2011, I have developed statewide legislative plans on behalf of clients in nine states (Alabama, Connecticut, Florida, Georgia, Kentucky, Mississippi, South Carolina, Texas, and Virginia), as well as over 150 local redistricting plans in approximately 30 states – primarily for groups working to protect minority voting rights. In addition, I have prepared congressional plans for clients in eight states (Alabama, Florida, Georgia, Louisiana, Maryland, Ohio, Pennsylvania, South Carolina, and Virginia).

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In March 2011, I was retained by the Sussex County, Virginia Board of Supervisors and the Bolivar County, Mississippi Board of Supervisors to draft new district plans based on the 2010 Census. In the summer of 2011, both counties received Section 5 preclearance from the U.S. Department of Justice (DOJ).

Also in 2011, I was retained by way of a subcontract with Olmedillo X5 LLC to assist with redistricting for the Miami-Dade County, Florida Board of Commissioners and the Miami-Dade, Florida School Board. Final plans were adopted in late 2011 following public hearings.

In the fall of 2011, I was retained by the City of Grenada, Mississippi to provide redistricting services. The ward plan I developed received DOJ preclearance in March 2012.

In 2012 and 2013, I served as a redistricting consultant to the Tunica County, Mississippi Board of Supervisors and the Claiborne County, Mississippi Board of Supervisors.

In *Montes v. City of Yakima* (E.D. Wash. Feb. 17, 2015) the court adopted, as a remedy for the Voting Rights Act Section 2 violation, a seven single-member district plan that I developed for the Latino plaintiffs. I served as the expert for the Plaintiffs in the liability and remedy phases of the case.

In *Pope v. Albany County* (N.D.N.Y. Mar. 24, 2015), the court approved, as a remedy for a Section 2 violation, a plan drawn by the defendants, creating a new Black-majority district. I served as the expert for the Plaintiffs in the liability and remedy phases of the case.

In 2016, two redistricting plans that I developed on behalf of the plaintiffs for consent decrees in Section 2 lawsuits in Georgia were adopted (*NAACP v. Fayette County, Georgia* and *NAACP v. Emanuel County, Georgia*).

December 31, 2021

In 2016, two federal courts granted summary judgment to the plaintiffs based in part on my *Gingles 1* testimony: *Navajo Nation v. San Juan County, Utah* (C.D. Utah 2016) and *NAACP v. Ferguson-Florissant School District, Missouri* (E. D. Mo. August 22, 2016).

Also in 2016, based in part on my analysis, the City of Pasco, Washington admitted to a Section 2 violation. As a result, in *Glatt v. City of Pasco* (E.D. Wash. Jan. 27, 2017), the court ordered a plan that created three Latino majority single-member districts in a 6 district, 1 at-large plan.

In 2018, I served as the redistricting consultant to the Governor Wolf interveners at the remedial stage of *League of Women Voters, et al. v. Commonwealth of Pennsylvania*.

In August 2018, the Wenatchee City Council adopted a hybrid election plan that I developed – five single-member districts with two members at-large. The Wenatchee election plan is the first plan adopted under the Washington Voting Rights Acts of 2018.

In February 2019, a federal court ruled in favor of the plaintiffs in a Section 2 case regarding Senate District 22 in Mississippi, based in part on my *Gingles 1* testimony in *Thomas v. Bryant* (S.D. Ms. Feb 16, 2019).

In the summer of 2019, I developed redistricting plans for the Grand County (Utah) Change of Form of Government Study Committee.

In the fall of 2019, a redistricting plan I developed for a consent decree involving the Jefferson County, Alabama Board of Education was adopted *Traci Jones, et al. v. Jefferson County Board of Education, et al.*

In May 2020, a federal court ruled in favor of the plaintiffs in a Section 2 case in *NAACP et al. v. East Ramapo Central School District, NY*, based in part on my *Gingles 1* testimony. In October 2020, the federal court adopted a consent decree plan I developed for elections to be held in February 2021.

December 31, 2021

In May and June of 2020, I served as a consultant to the City of Quincy, Florida – the Defendant in a Section 2 lawsuit filed by two Anglo voters (*Baroody v. City of Quincy*). The federal court for the Northern District of Florida ruled in favor of the Defendants. The Plaintiffs voluntarily dismissed the case.

In the summer of 2020, I provided technical redistricting assistance to the City of Chestertown, Maryland.

I am currently a redistricting consultant and expert for the plaintiffs in *Jayla Allen v. Waller County, Texas*. I testified remotely at trial in October 2020.

Since 2011, I have served as a redistricting and demographic consultant to the Massachusetts-based Prison Policy Initiative for a nationwide project to end prison-based gerrymandering. I have analyzed proposed and adopted election plans in about 25 states as part of my work.

In 2018 (Utah) and again in 2020 (Arizona), I have provided technical assistance to the Rural Utah Project for voter registration efforts on the Navajo Nation Reservation.

Post-2010 Demographics Experience

My trial testimony in Section 2 lawsuits usually includes presentations of U.S. Census data with charts, tables, and/or maps to demonstrate socioeconomic disparities between non-Hispanic Whites and racial or ethnic minorities.

I served as a demographic expert for plaintiffs in four state-level voting cases related to the Covid-19 pandemic (South Carolina, Alabama, and Louisiana) and state court in North Carolina.

I have also served as an expert witness on demographics in non-voting trials. For example, in an April 2017 opinion in *Stout v. Jefferson County Board of Education* (Case no.2:65-cv-00396-MHH), a school desegregation case involving the City of Gardendale,

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Ala., the court made extensive reference to my testimony.

I provide technical demographic and mapping assistance to the Food Research and Action Center (FRAC) in Washington D.C and their constituent organizations around the country. Most of my work with FRAC involves the Summer Food Program and Child and Adult Care Food Program. Both programs provide nutritional assistance to school-age children who are eligible for free and reduced price meals. As part of this project, I developed an online interactive map to determine site eligibility for the two programs that has been in continuous use by community organizations and school districts around the country since 2003. The map is updated annually with new data from a Special Tabulation of the American Community Survey prepared by the U.S. Census Bureau for the Food and Nutrition Service of the U.S. Department of Agriculture.

Historical Redistricting Experience

In the 1980s and 1990s, I developed voting plans in about 400 state and local jurisdictions – primarily in the South and Rocky Mountain West. During the 2000s and 2010s, I prepared draft election plans involving about 350 state and local jurisdictions in 25 states. Most of these plans were prepared at the request of local citizens' groups, national organizations such as the NAACP, tribal governments, and for Section 2 or Section 5 litigation.

Election plans I developed for governments in two counties – Sussex County, Virginia and Webster County, Mississippi – were adopted and precleared in 2002 by the U.S. Department of Justice. A ward plan I prepared for the City of Grenada, Mississippi was precleared in August 2005. A county supervisors' plan I produced for Bolivar County, Mississippi was precleared in January 2006.

In August 2005, a federal court ordered the State of South Dakota to remedy a

December 31, 2021

Section 2 voting rights violation and adopt a state legislative plan I developed (*Bone Shirt v. Hazeltine*).

A county council plan I developed for Native American plaintiffs in a Section 2 lawsuit (*Blackmoon v. Charles Mix County*) was adopted by Charles Mix County, South Dakota in November 2005. A plan I drafted for Latino plaintiffs in Bethlehem, Pennsylvania (*Pennsylvania Statewide Latino Coalition v. Bethlehem Area School District*) was adopted in March 2009. Plans I developed for minority plaintiffs in Columbus County, North Carolina and Montezuma- Cortez School District in Colorado were adopted in 2009.

Since 1986, I have testified at trial as an expert witness on redistricting and demographics in federal courts in the following voting rights cases (approximate most recent testimony dates are in parentheses). I also filed declarations and was deposed in most of these cases.

Alabama

Chestnut v. Merrill (2019)

Alabama State Conference of the NAACP v. Alabama (2018)

Alabama Legislative Black Caucus et al. v. Alabama et al. (2013)

Colorado

Cuthair v. Montezuma-Cortez School Board (1997)

Florida

Baroody v. City of Quincy (2020)

Georgia

Cofield v. City of LaGrange (1996)

Love v. Deal (1995)

Askew v. City of Rome (1995)

Woodard v. Lumber City (1989)

Louisiana

Terrebonne Parish NAACP v. Jindal, et al. (2017)

Wilson v. Town of St. Francisville (1996)

Reno v. Bossier Parish (1995)

Knight v. McKeithen (1994)

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Maryland

Cane v. Worcester County (1994)

Mississippi

Thomas v. Bryant (2019)

Fairley v. Hattiesburg (2014)

Boddie v. Cleveland School District (2010)

Fairley v. Hattiesburg (2008)

Boddie v. Cleveland (2003)

Jamison v. City of Tupelo (2006)

Smith v. Clark (2002)

NAACP v. Fordice (1999)

Addy v Newton County (1995)

Ewing v. Monroe County (1995)

Gunn v. Chickasaw County (1995)

Nichols v. Okolona (1995)

Montana

Old Person v. Brown (on remand) (2001)

Old Person v. Cooney (1998)

Missouri

Missouri NAACP v. Ferguson-Florissant School District (2016)

Nebraska

Stabler v. Thurston County (1995)

New York

NAACP v. East Ramapo Central School District (2020)

Pope v. County of Albany (2015)

Arbor Hills Concerned Citizens v. Albany County (2003)

Ohio

A. Philip Randolph Institute, et al. v. Ryan (2019)

South Carolina

Smith v. Beasley (1996)

South Dakota

Bone Shirt v. Hazeltine (2004)

Cottier v. City of Martin (2004)

Tennessee

Cousins v. McWherter (1994)

Rural West Tennessee African American Affairs Council v. McWherter (1993)

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Texas

Jayla Allen v. Waller County, Texas

Utah

Navajo Nation v. San Juan County (2017), brief testimony – 11 declarations, 2 depositions

Virginia

Smith v. Brunswick County (1991)

Henderson v. Richmond County (1988)

McDaniel v. Mehfoud (1988)

White v. Daniel (1989)

Wyoming

Large v. Fremont County (2007)

In addition, I have filed expert declarations or been deposed in the following cases that did not require trial testimony. The dates listed indicate the deposition date or date of last declaration or supplemental declaration:

Alabama

Caster v. Merrill (2021)

People First of Alabama v. Merrill (2020), Covid-19 demographics only

Alabama State NAACP v. City of Pleasant Grove (2019)

James v. Jefferson County Board of Education (2019)

Voketz v. City of Decatur (2018)

Arkansas

Mays v. Thurston (2020)-- Covid-19 demographics only)

Connecticut

NAACP v. Merrill (2020)

Florida

Florida State Conference of the NAACP v. Lee, et al, (2021)

Calvin v. Jefferson County (2016)

Thompson v. Glades County (2001)

Johnson v. DeSoto County (1999)

Burton v. City of Belle Glade (1997)

Georgia

Dwight v. Kemp (2018)

Georgia NAACP et al. v. Gwinnett County, GA (2018)

Georgia State Conference NAACP et al v. Georgia (2018)

Georgia State Conference NAACP, et al. v. Fayette County (2015)

Knighton v. Dougherty County (2002)

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Johnson v. Miller (1998)

Jones v. Cook County (1993)

Kentucky

Herbert v. Kentucky State Board of Elections (2013)

Louisiana

Power Coalition for Equity and Justice v. Edwards (2020), Covid-19 demographics only

Johnson v. Ardoin (2019)

NAACP v. St. Landry Parish Council (2005)

Prejean v. Foster (1998)

Rodney v. McKeithen (1993)

Maryland

Benisek v. Lamone (2017)

Fletcher v. Lamone (2011)

Mississippi

Partee v. Coahoma County (2015)

Figgs v. Quitman County (2015)

West v. Natchez (2015)

Williams v. Bolivar County (2005)

Houston v. Lafayette County (2002)

Clark v. Calhoun County (on remand)(1993)

Teague v. Attala County (on remand)(1993)

Wilson v. Clarksdale (1992)

Stanfield v. Lee County(1991)

Montana

Alden v. Rosebud County (2000)

North Carolina

Lewis v. Alamance County (1991)

Gause v. Brunswick County (1992)

Webster v. Person County (1992)

Rhode Island

Davidson v. City of Cranston (2015)

South Carolina

Thomas v. Andino (2020), Covid-19 demographics only

Vander Linden v. Campbell (1996)

South Dakota

Kirkie v. Buffalo County (2004)

Emery v. Hunt (1999)

Tennessee

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NAACP v. Frost, et al. (2003)

Virginia

Moon v. Beyer (1990)

Washington

Glatt v. City of Pasco (2016)

Montes v. City of Yakima (2014)

#

COOPER DECLARATION

EXHIBIT B

Exhibit B – Methodology and Sources

1. In the preparation of this report, I analyzed population and geographic data from the Decennial Census and the American Community Survey.

2. For my redistricting analysis, I used a geographic information system (GIS) software package called *Maptitude for Redistricting*, developed by the Caliper Corporation. This software is deployed by many local and state governing bodies across the country for redistricting and other types of demographic analysis.

3. The geographic boundary files that I used with *Maptitude* are created from the U.S. Census 2020 TIGER (Topologically Integrated Geographic Encoding and Referencing) files.

4. I used population data from the 2000-2020 PL 94-171 data files published by the U.S. Census Bureau. The PL 94-171 dataset is published in electronic format and is the complete count population file designed by the Census Bureau for use in legislative redistricting. The file contains basic race and ethnicity data on the total population and voting-age population found in units of Census geography such as states, counties, municipalities, townships, reservations, school districts, census tracts, census block groups, precincts (called voting districts or “VTDs” by the Census Bureau) and census blocks.

5. I obtained 2020 block-level disaggregated citizenship (2015-19 ACS data) from the Redistricting Data Hub.

6. The attorneys for the plaintiffs provided me with incumbent addresses.

7. For my analysis, I also relied on a shapefile for the 2021 Council Plan provided to me by the Plaintiffs’ attorneys.

8. I developed the illustrative plans presented in this report using *Maptitude for Redistricting*. The *Maptitude for Redistricting* software processes the TIGER files to produce a

map for display on a computer screen. The software also merges demographic data from the PL 94-171 files to match the relevant decennial Census geography.

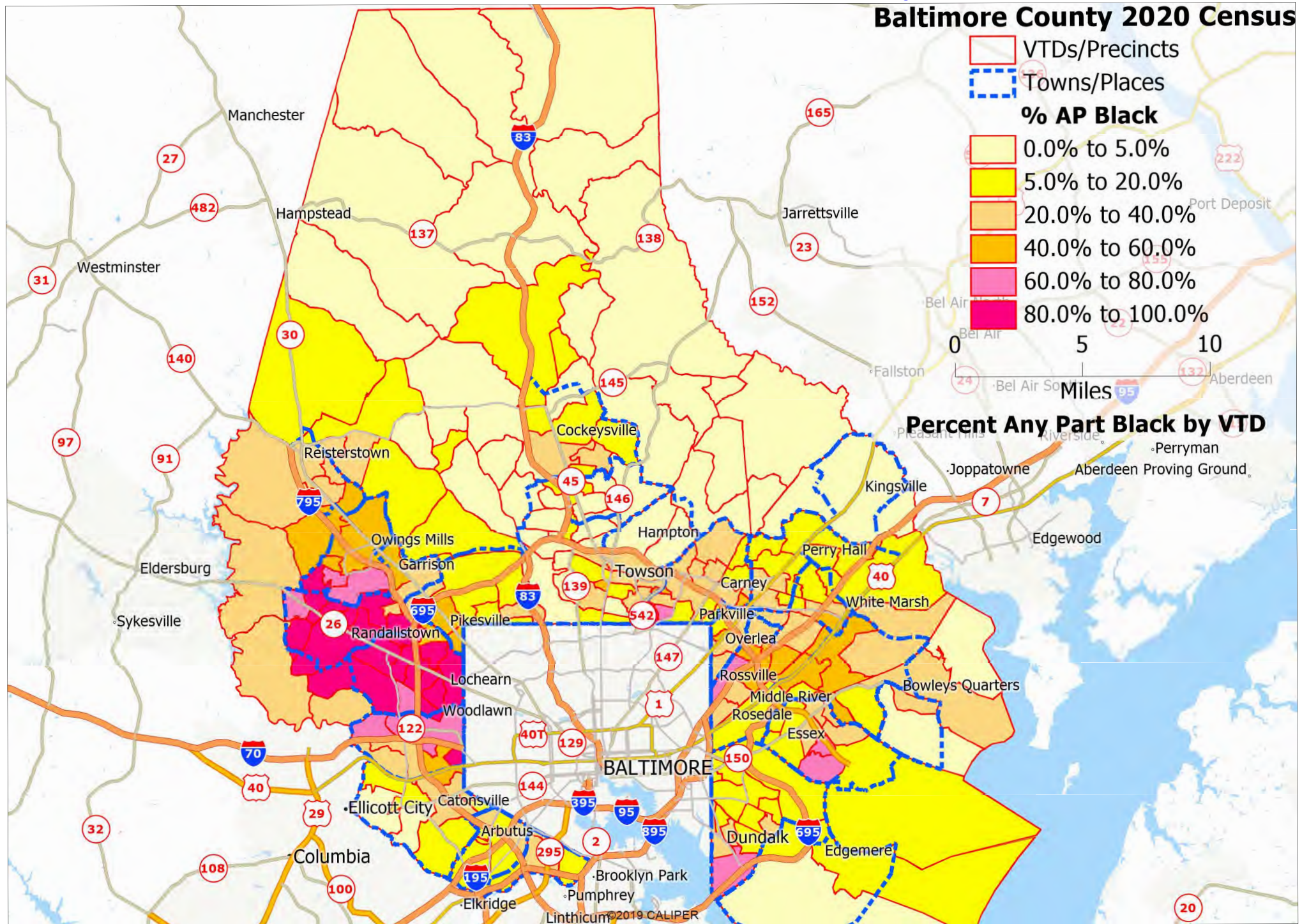
9. I also reviewed and used data from the American Community Survey (“ACS”) conducted by the Census Bureau – specifically, the 1-year 2019 ACS, the 5-year 2015-2019 ACS, and the 5-year 2015-2019 ACS Special Tabulation of citizen population and voting age population by race and ethnicity (prepared by the Census Bureau for the U.S. Department of Justice) and available from the link below:

<https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.html>

#

COOPER DECLARATION

EXHIBIT C-1



COOPER DECLARATION

EXHIBIT C-2

Baltimore County Census Designated Places - 2020 Census													
CDPs	Population	NH SR				Latino	% Latino	Asian	% Asian	White	% White	BIPOC	% BIPOC
		SR Black	Black	AP Black	% AP Black								
Arbutus	21655	2613	2569	3078	14.2%	1057	4.9%	3093	14.3%	13657	63.1%	7998	36.9%
Baltimore Highla	7740	1591	1550	1799	23.2%	1999	25.8%	300	3.9%	3408	44.0%	4332	56.0%
Bowleys Quarters	6853	1256	1231	1391	20.3%	233	3.4%	106	1.5%	4942	72.1%	1911	27.9%
Carney	29363	6579	6486	7185	24.5%	1442	4.9%	2125	7.2%	17906	61.0%	11457	39.0%
Catonsville	44701	6727	6616	7693	17.2%	2334	5.2%	4122	9.2%	29150	65.2%	15551	34.8%
Cockeysville	24184	4890	4812	5385	22.3%	3290	13.6%	2828	11.7%	12167	50.3%	12017	49.7%
Dundalk	67796	9763	9523	11720	17.3%	9645	14.2%	1371	2.0%	42558	62.8%	25238	37.2%
Edgemere	9069	370	368	460	5.1%	245	2.7%	55	0.6%	7930	87.4%	1139	12.6%
Essex	40505	12812	12613	14073	34.7%	3245	8.0%	852	2.1%	21129	52.2%	19376	47.8%
Garrison	9487	4105	4070	4323	45.6%	395	4.2%	413	4.4%	4257	44.9%	5230	55.1%
Hampton	5180	116	114	168	3.2%	134	2.6%	324	6.3%	4387	84.7%	793	15.3%
Honeygo	12927	1484	1463	1661	12.8%	449	3.5%	2107	16.3%	8296	64.2%	4631	35.8%
Kingsville	4358	45	45	67	1.5%	150	3.4%	58	1.3%	3957	90.8%	401	9.2%
Lansdowne	9004	2133	2098	2414	26.8%	1870	20.8%	373	4.1%	4094	45.5%	4910	54.5%
Lochearn	25511	20634	20502	21346	83.7%	1388	5.4%	360	1.4%	2272	8.9%	23239	91.1%
Lutherville	6835	266	262	376	5.5%	332	4.9%	678	9.9%	5180	75.8%	1655	24.2%
Mays Chapel	12224	352	341	457	3.7%	455	3.7%	1693	13.8%	9265	75.8%	2959	24.2%
Middle River	33203	10836	10704	11885	35.8%	2856	8.6%	1451	4.4%	16202	48.8%	17001	51.2%
Milford Mill	30622	25564	25360	26439	86.3%	1747	5.7%	698	2.3%	1696	5.5%	28926	94.5%
Overlea	12832	3519	3481	3839	29.9%	726	5.7%	613	4.8%	7344	57.2%	5488	42.8%
Owings Mills	35674	21434	21214	22549	63.2%	3463	9.7%	2536	7.1%	6940	19.5%	28734	80.5%
Parkville	31812	12101	11937	12964	40.8%	2352	7.4%	1167	3.7%	14722	46.3%	17090	53.7%
Perry Hall	29409	4579	4528	5042	17.1%	1105	3.8%	3832	13.0%	18554	63.1%	10855	36.9%
Pikesville	34168	6602	6511	7153	20.9%	1560	4.6%	1709	5.0%	22986	67.3%	11182	32.7%
Randallstown	33655	27388	27152	28477	84.6%	1213	3.6%	658	2.0%	3253	9.7%	30402	90.3%
Reisterstown	26822	9443	9295	10396	38.8%	3894	14.5%	2112	7.9%	10076	37.6%	16746	62.4%
Rosedale	19961	7885	7833	8324	41.7%	1737	8.7%	1296	6.5%	8181	41.0%	11780	59.0%
Rossville	16029	6821	6739	7226	45.1%	1299	8.1%	1723	10.7%	5485	34.2%	10544	65.8%
Timonium	10458	530	521	637	6.1%	521	5.0%	1065	10.2%	7978	76.3%	2480	23.7%
Towson	59553	10448	10218	11592	19.5%	3263	5.5%	3760	6.3%	39503	66.3%	20050	33.7%
White Marsh	10287	1565	1547	1755	17.1%	449	4.4%	1523	14.8%	6298	61.2%	3989	38.8%
Woodlawn	39986	22533	22339	23591	59.0%	3459	8.7%	6190	15.5%	6235	15.6%	33751	84.4%
County Remainder	92672	8809	8682	9895	10.7%	3185	3.4%	3510	3.8%	73255	79.0%	19417	21.0%

Source: 2020 Census PL94-171 file

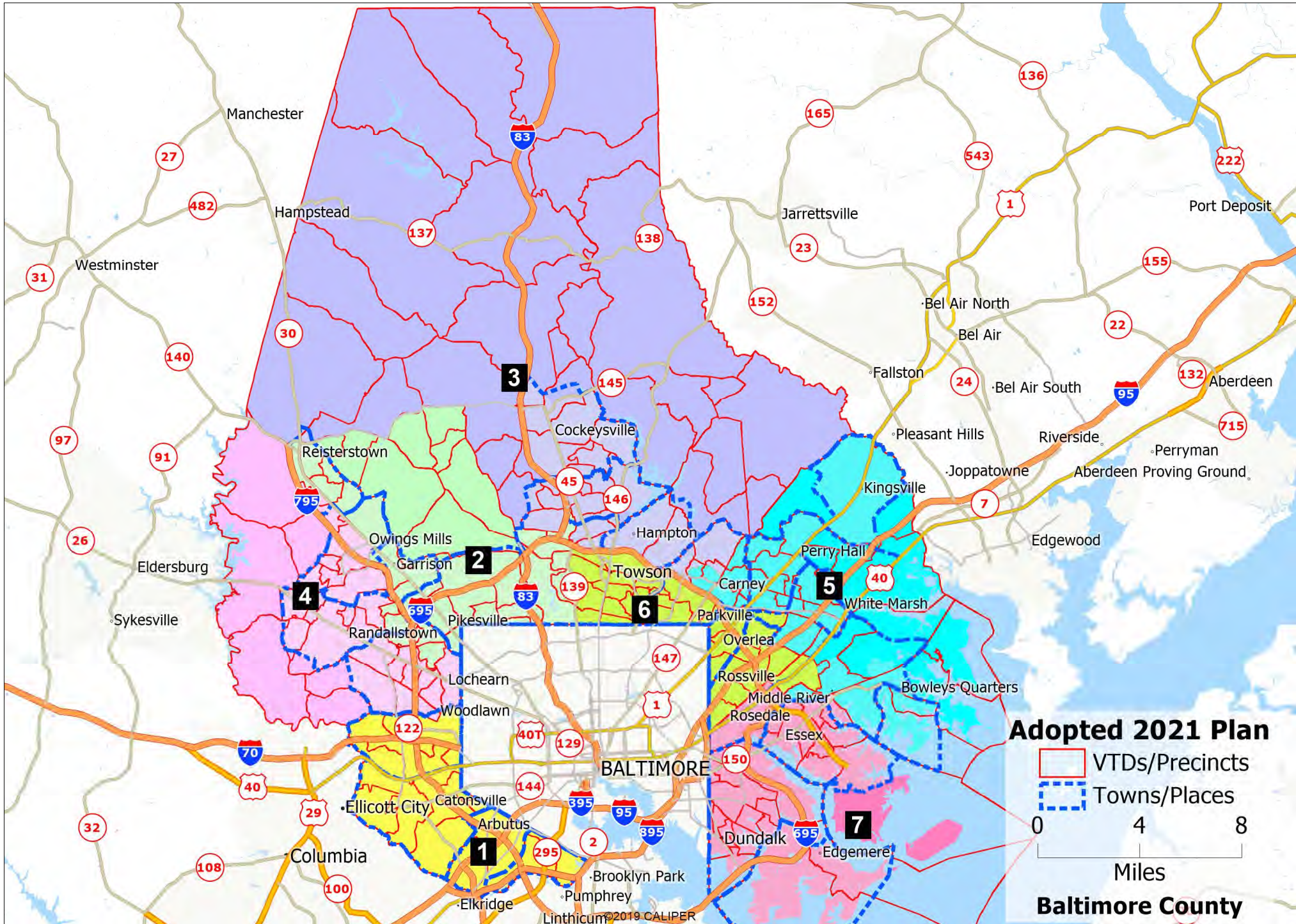
over 38.8% AP Black (plurality-Black)

under 50% NH White

over 50% BIPOC

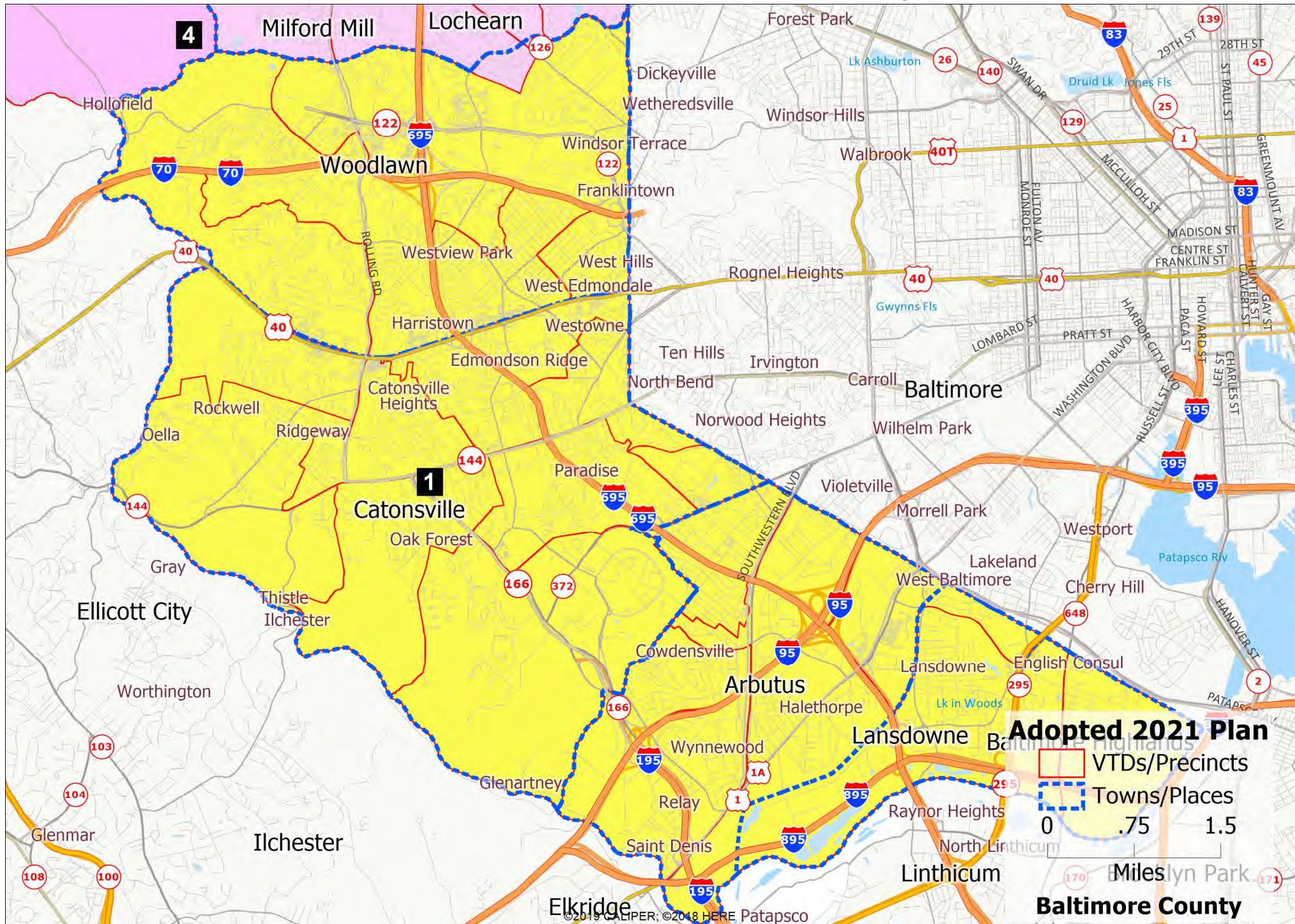
COOPER DECLARATION

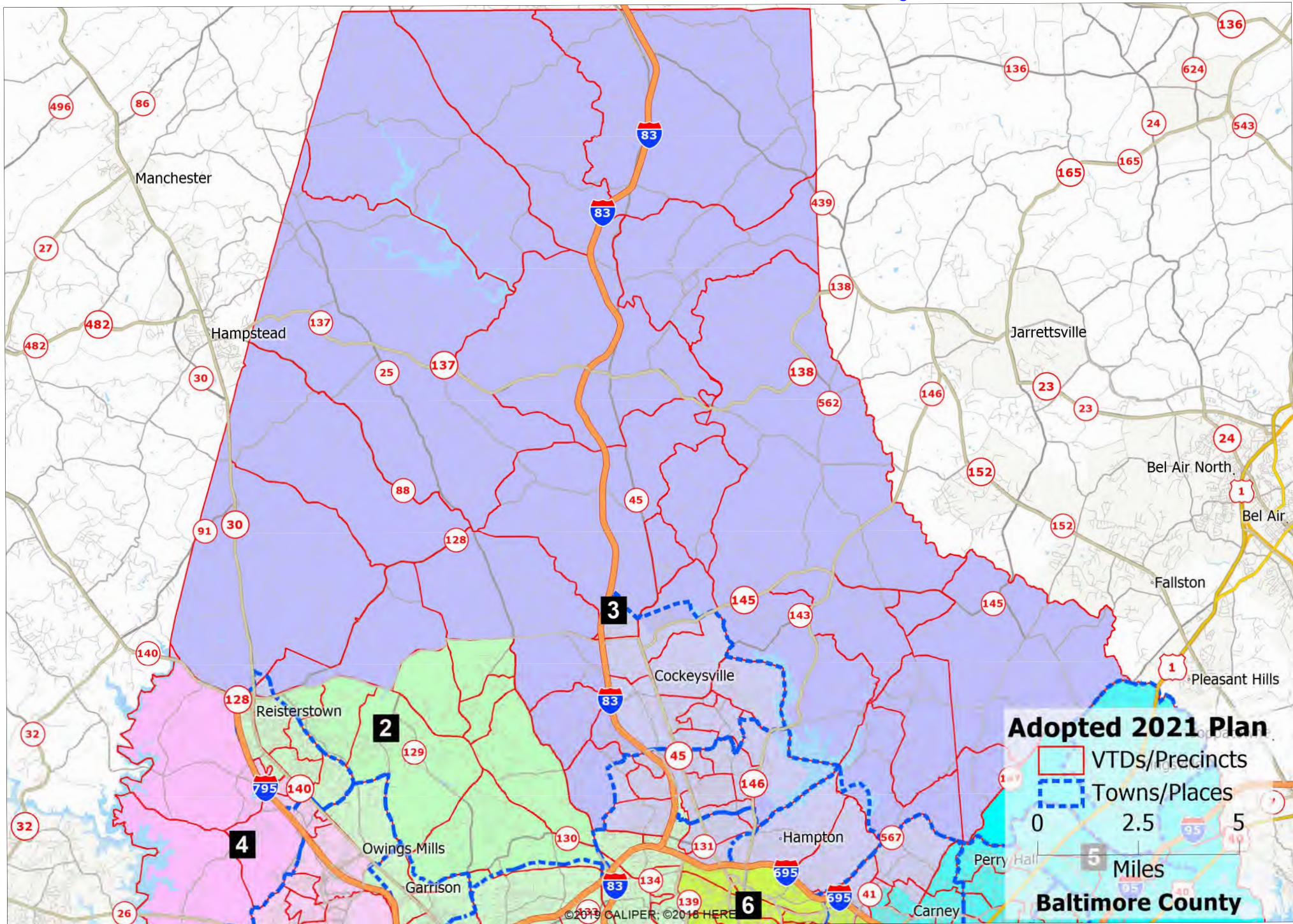
EXHIBIT D-1

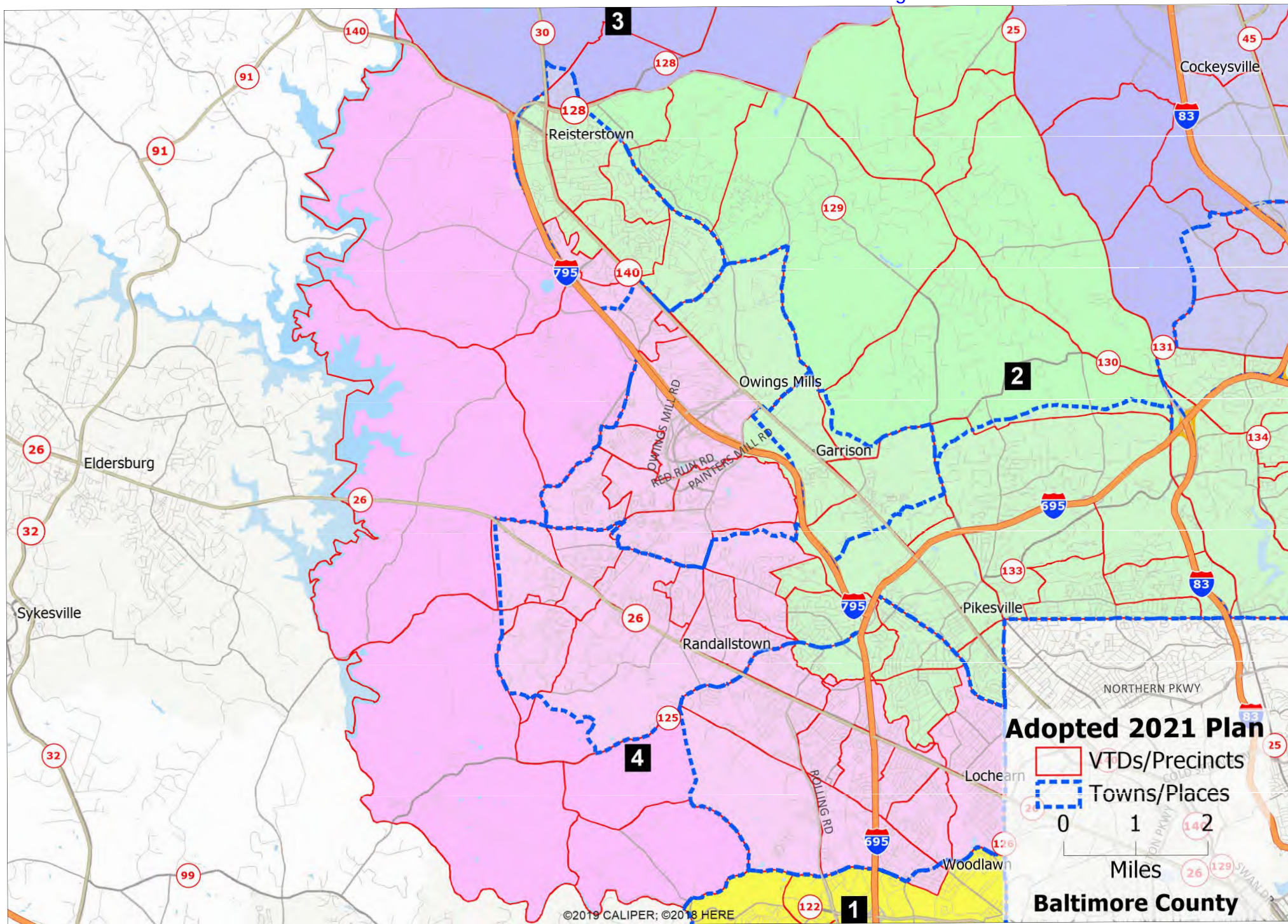


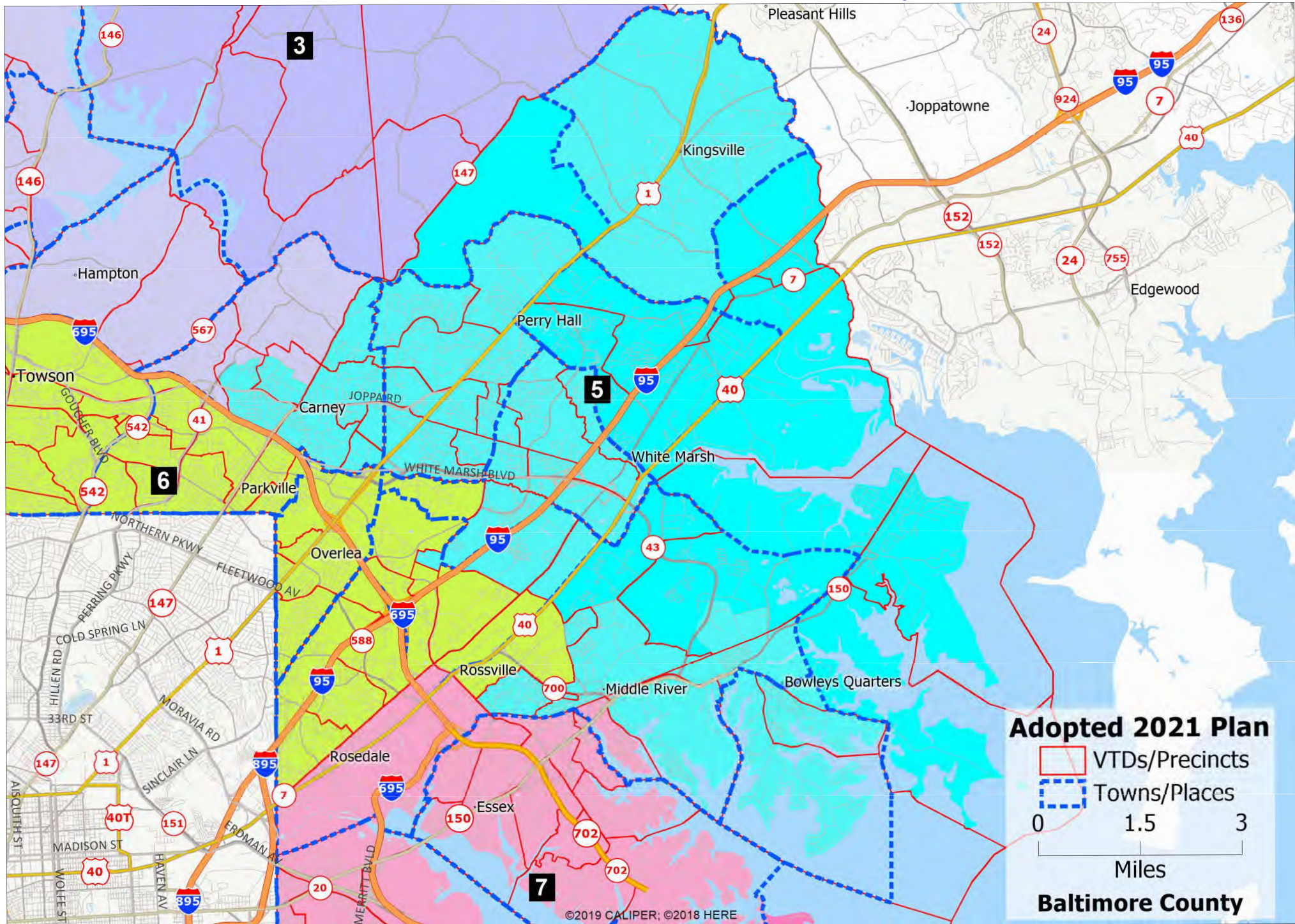
COOPER DECLARATION

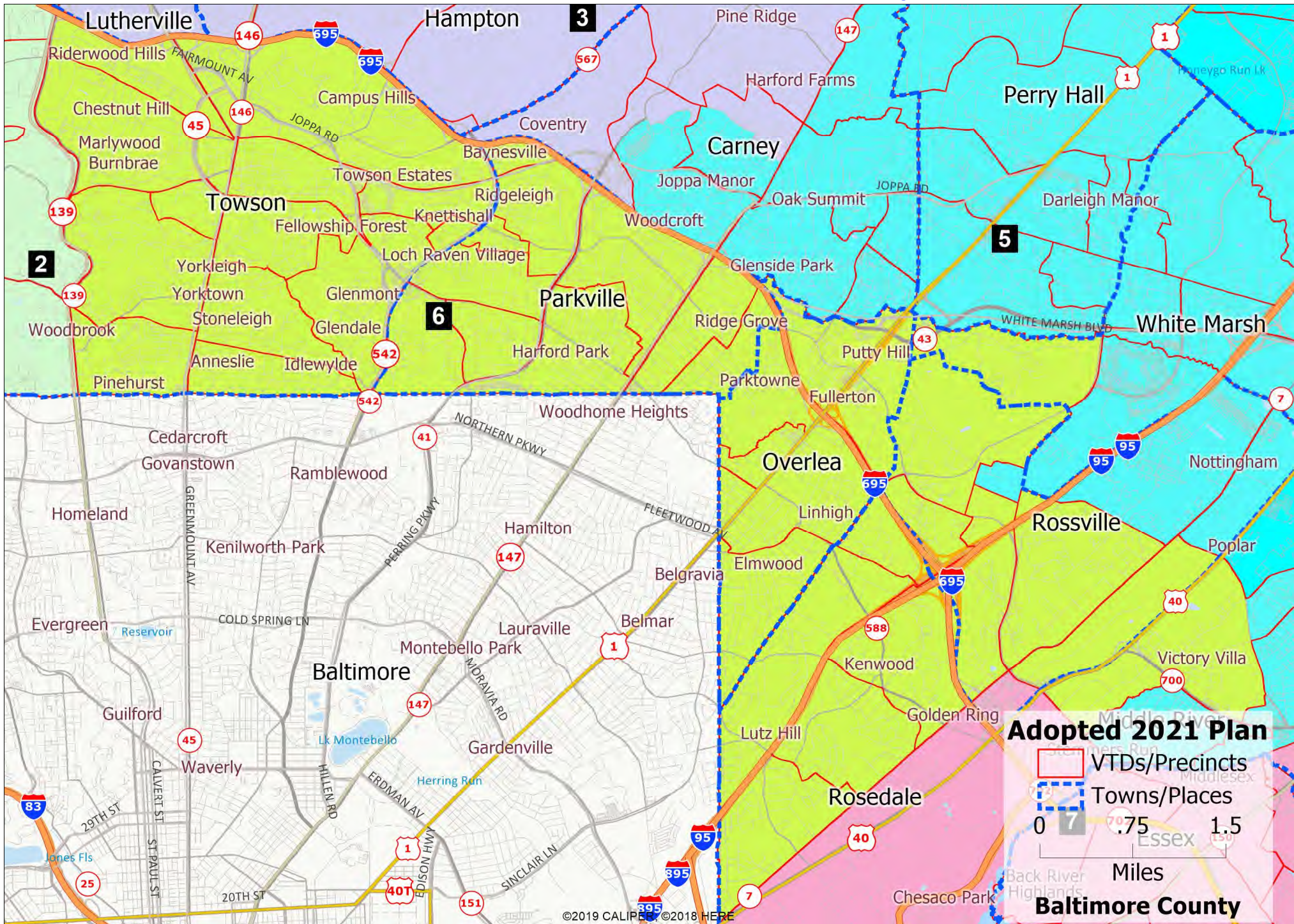
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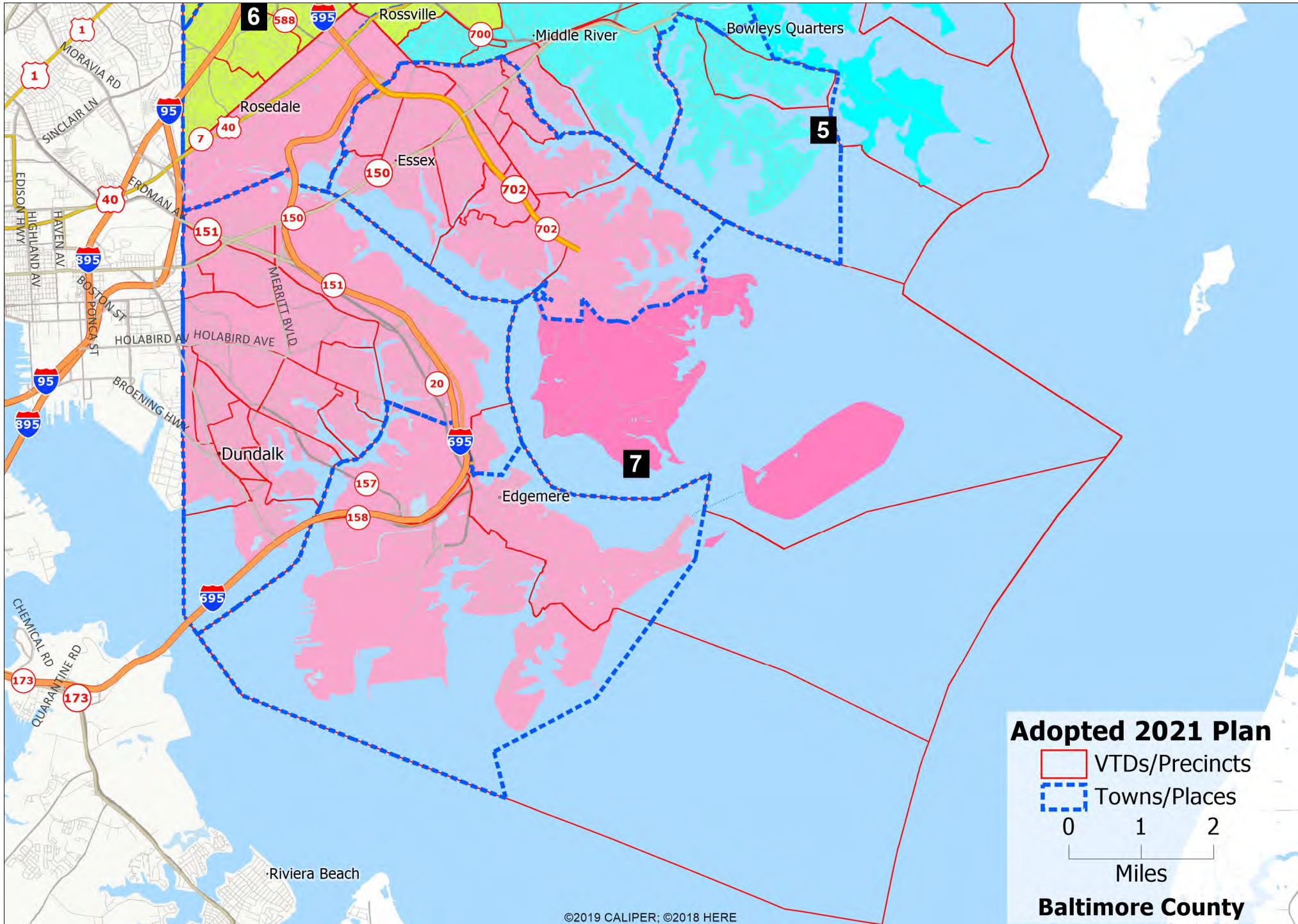












COOPER DECLARATION

EXHIBIT D-3

Population Summary Report (2020 Census)
Baltimore County Council -- Adopted 2021 Plan

District	Adusted Population	Deviation	% Deviation	2020 Population	Any Part Black	% Any Part Black	Single-race Black	% Single- race Black	Latino	% Latino	NH White	% NH White
1	122391	9	0.01%	122074	37817	30.98%	34867	28.56%	10608	8.69%	56432	46.23%
2	118343	-4039	-3.30%	118145	38339	32.45%	35724	30.24%	9130	7.73%	62471	52.88%
3	119477	-2905	-2.37%	119377	10852	9.09%	9409	7.88%	6739	5.65%	89367	74.86%
4	119487	-2895	-2.37%	119068	90626	76.11%	87072	73.13%	6259	5.26%	17106	14.37%
5	121237	-1145	-0.94%	121023	26367	21.79%	23971	19.81%	6079	5.02%	74595	61.64%
6	128310	5928	4.84%	127988	42693	33.36%	39674	31.00%	8724	6.82%	65893	51.48%
7	127428	5046	4.12%	126860	28666	22.60%	25076	19.77%	13953	11.00%	77399	61.01%
Total	856673		8.14%	854535	275360	32.22%	255793	29.93%	61492	7.20%	443263	51.87%

District	18+_Pop	18+_AP Black	% 18+_AP Black	18+_NH AP Black	% 18+_NH AP Black	18+ Latino	% 18+ Latino	18+_NH AP Asian	% 18+_NH AP Asian	18+_NH White	% 18+_NH White
1	95419	28350	29.71%	27868	29.21%	6952	7.29%	11490	12.04%	47230	49.50%
2	91675	28588	31.18%	28110	30.66%	5961	6.50%	5455	5.95%	50929	55.55%
3	94192	7619	8.09%	7369	7.82%	4399	4.67%	7531	8.00%	73077	77.58%
4	93489	69875	74.74%	69062	73.87%	4261	4.56%	4070	4.35%	15244	16.31%
5	94526	17745	18.77%	17382	18.39%	3872	4.10%	8699	9.20%	62501	66.12%
6	102680	32038	31.20%	31383	30.56%	6121	5.96%	7274	7.08%	56173	54.71%
7	97530	19232	19.72%	18639	19.11%	8623	8.84%	2380	2.44%	64412	66.04%
Total	669511	203447	30.39%	199813	29.84%	40189	6.00%	46899	7.00%	369566	55.20%

District	% NH Single- Race Black CVAP*	% Latino CVAP	% NH Single- Race Asian CVAP*
1	40.24%	2.38%	9.50%
2	40.01%	3.43%	5.47%
3	9.95%	2.70%	8.07%
4*	96.09%	1.77%	4.40%
5	21.04%	1.88%	9.15%
6	36.60%	3.75%	5.93%
7	26.09%	3.06%	2.10%

Note: Citizen Voting Age Population (CVAP) percentages are disaggregated from block-group level ACS estimates (with a survey midpoint of July 2017)

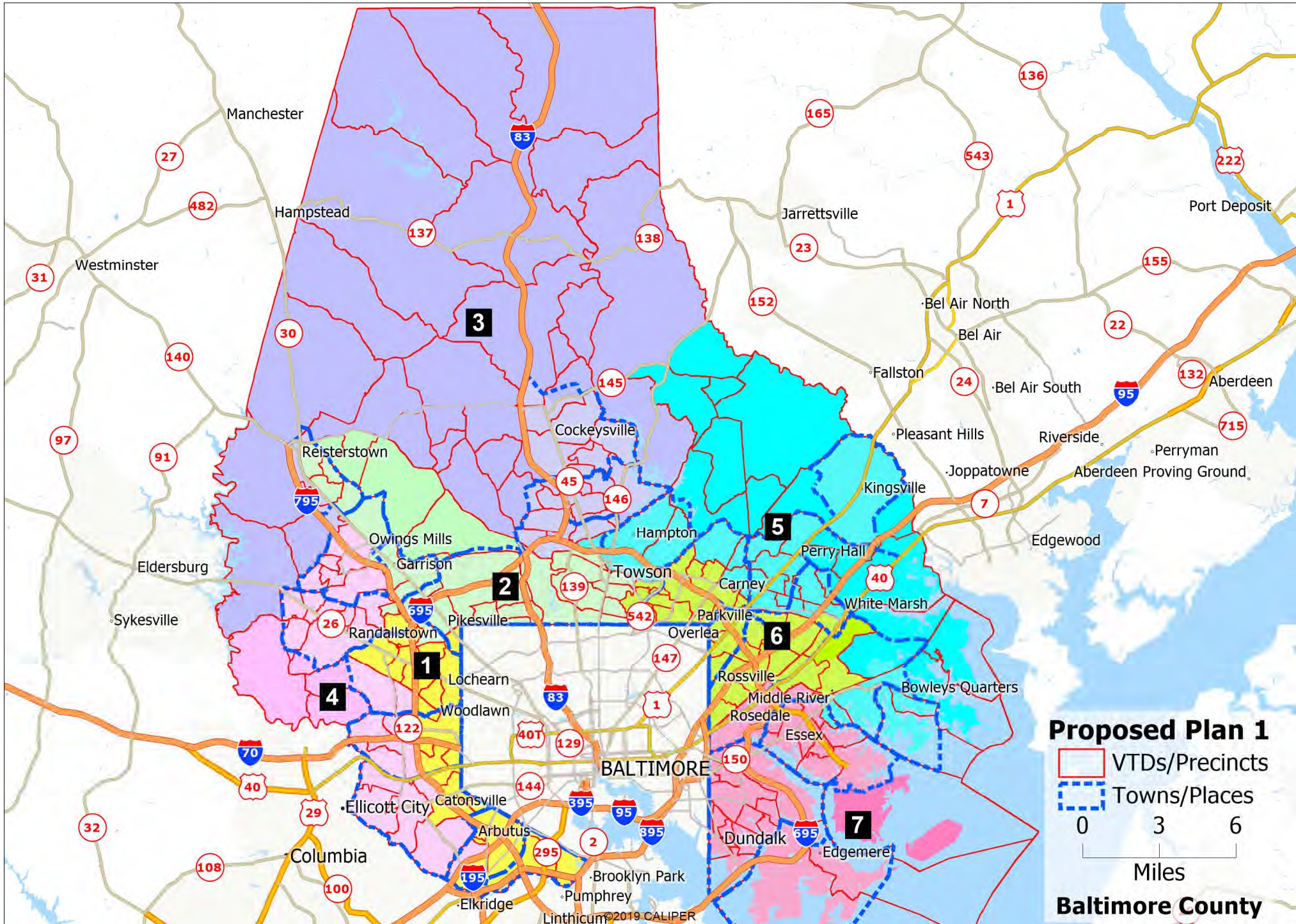
Source for CVAP disaggregation: Redistricting Data Hub

<https://redistrictingdatahub.org/dataset/maryland-cvap-data-disaggregated-to-the-2020-block-level-2019/>

* Apparent over-estimate of Black CVAP in disaggregated data

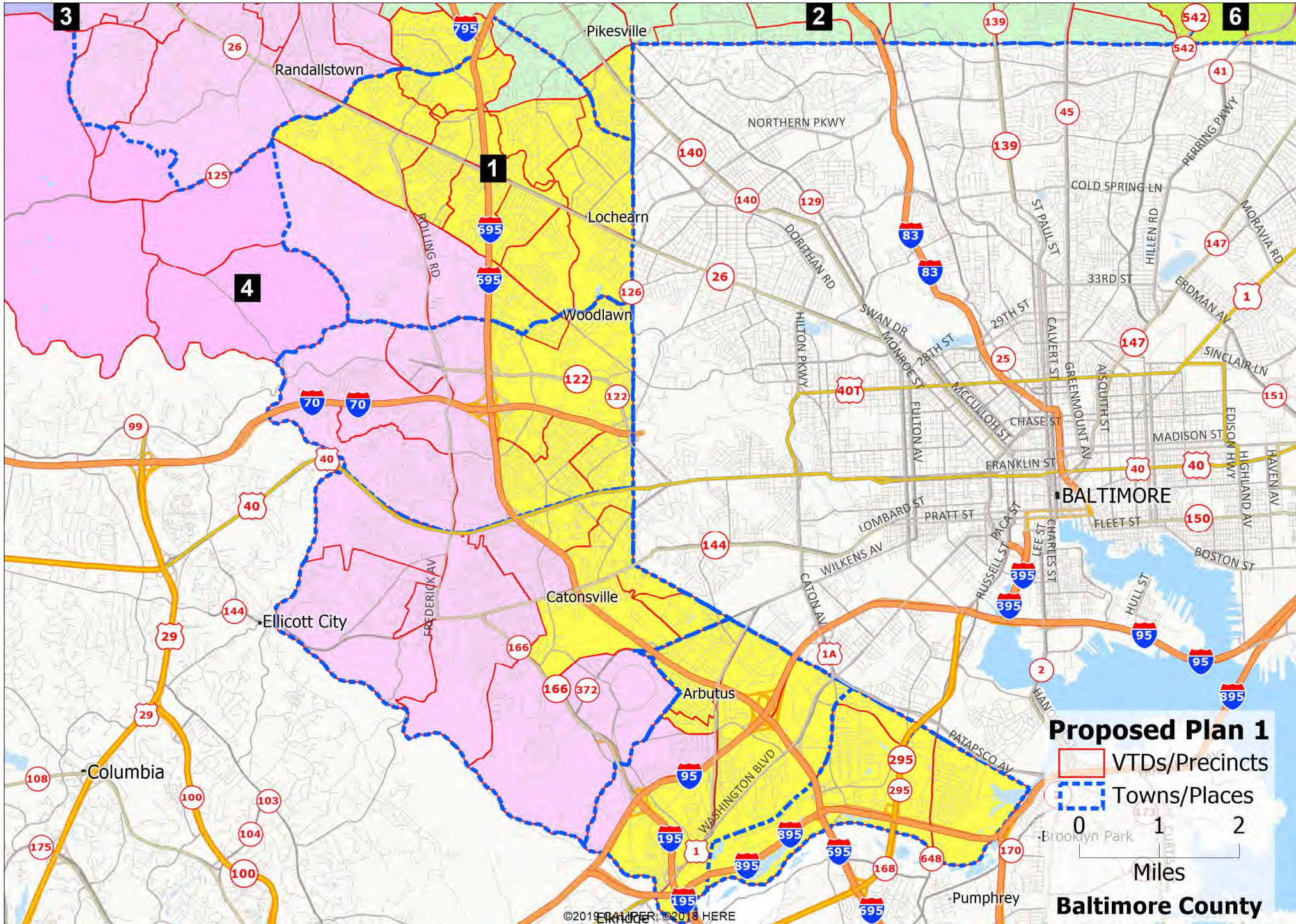
COOPER DECLARATION

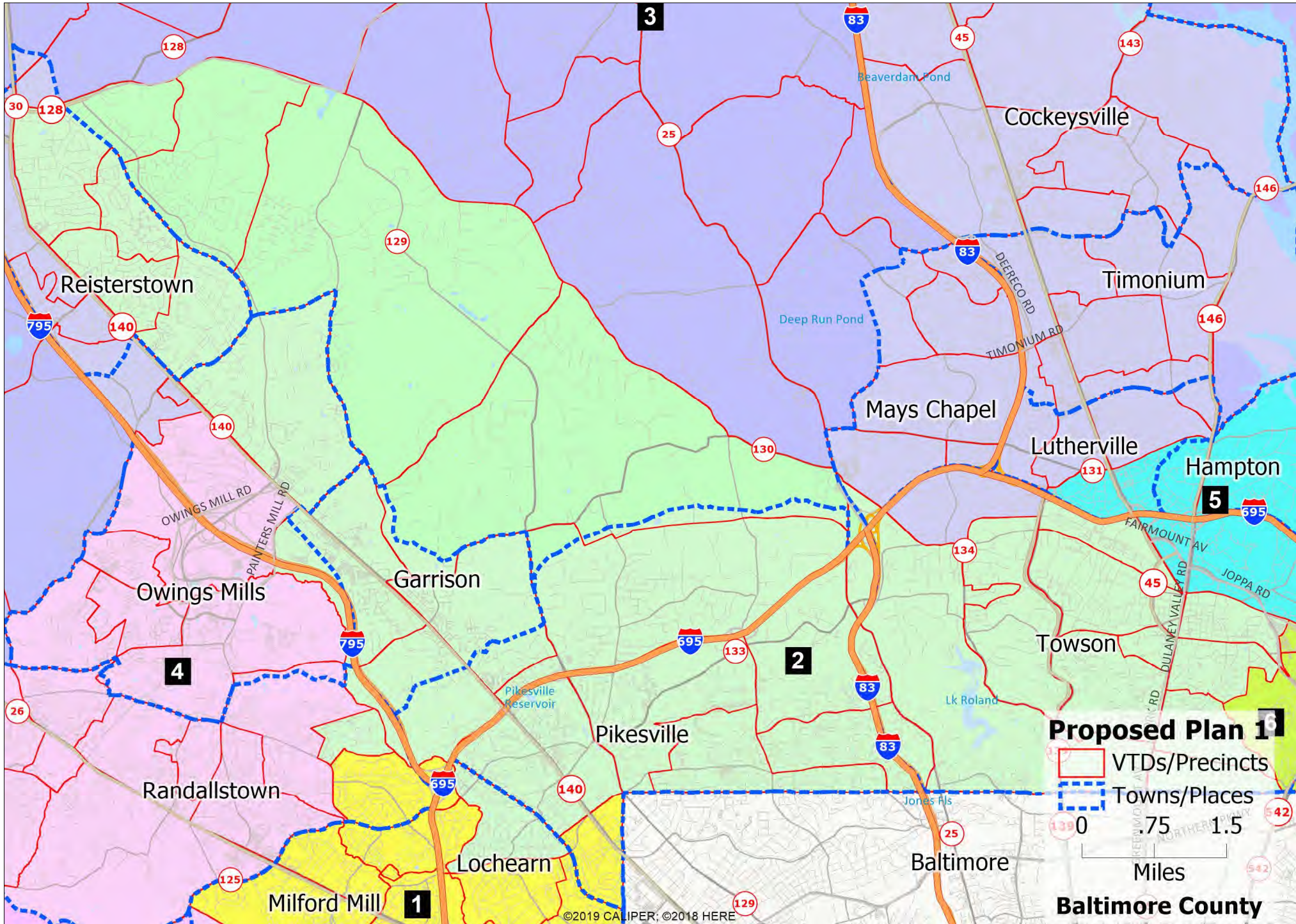
EXHIBIT E-1

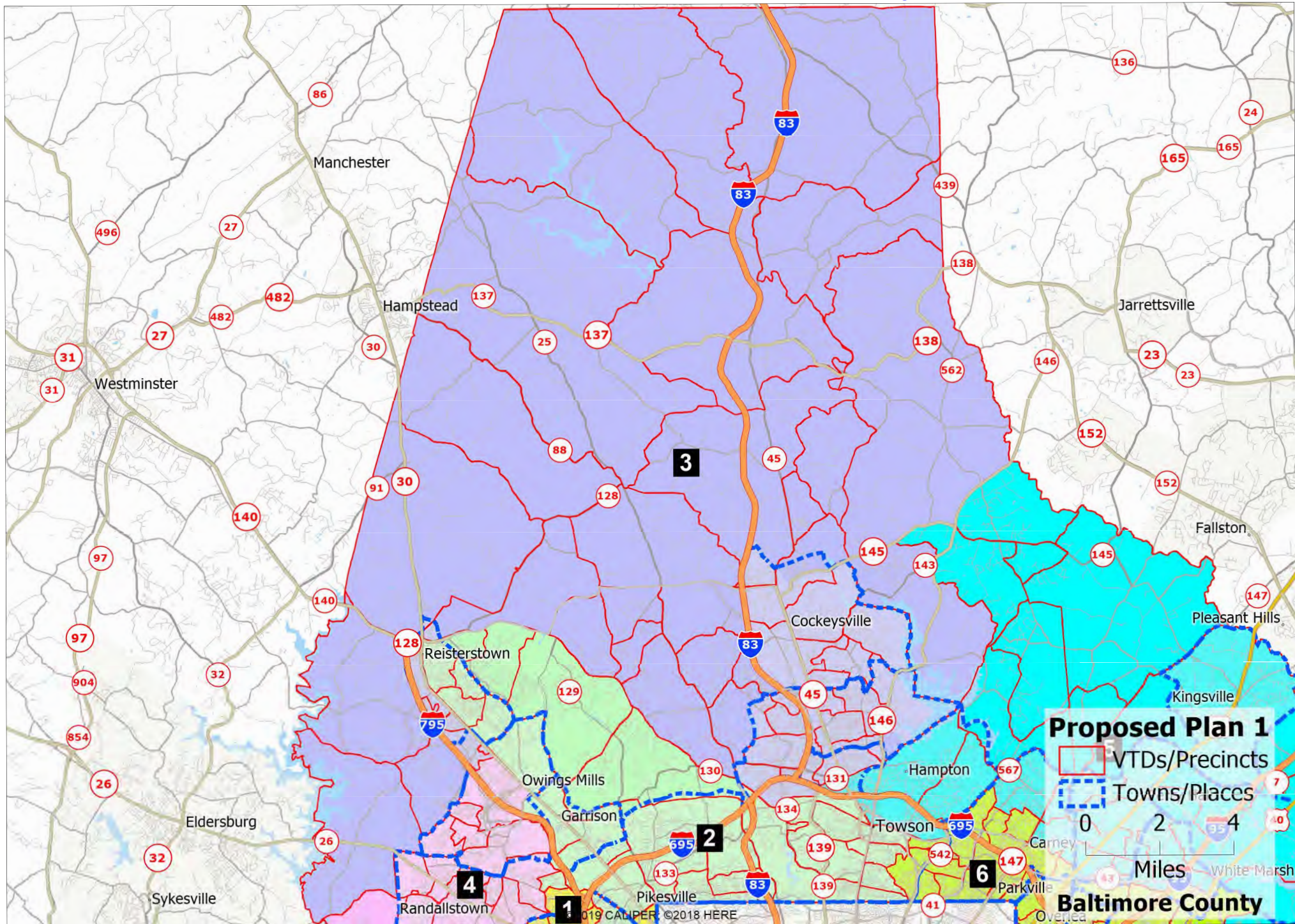


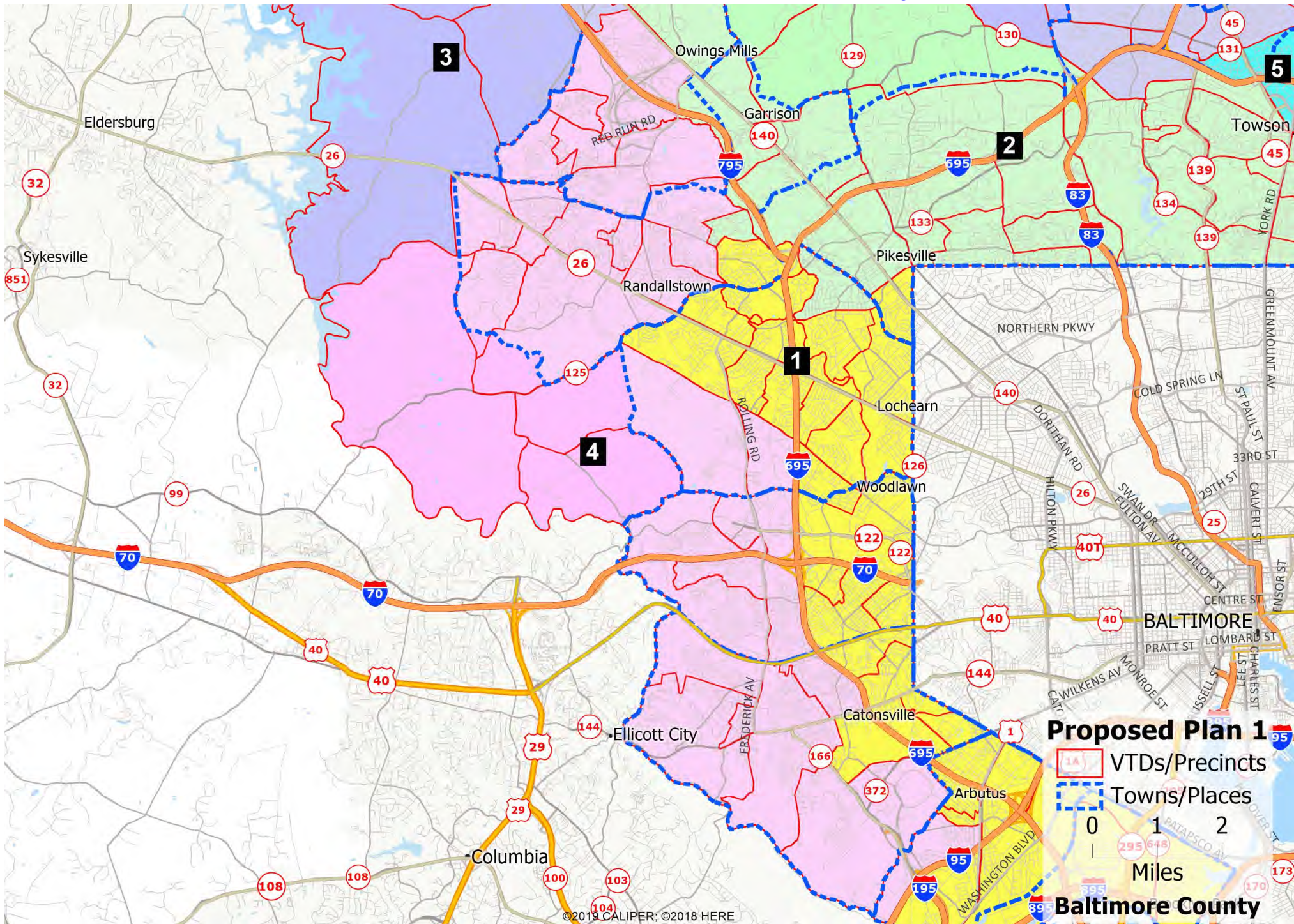
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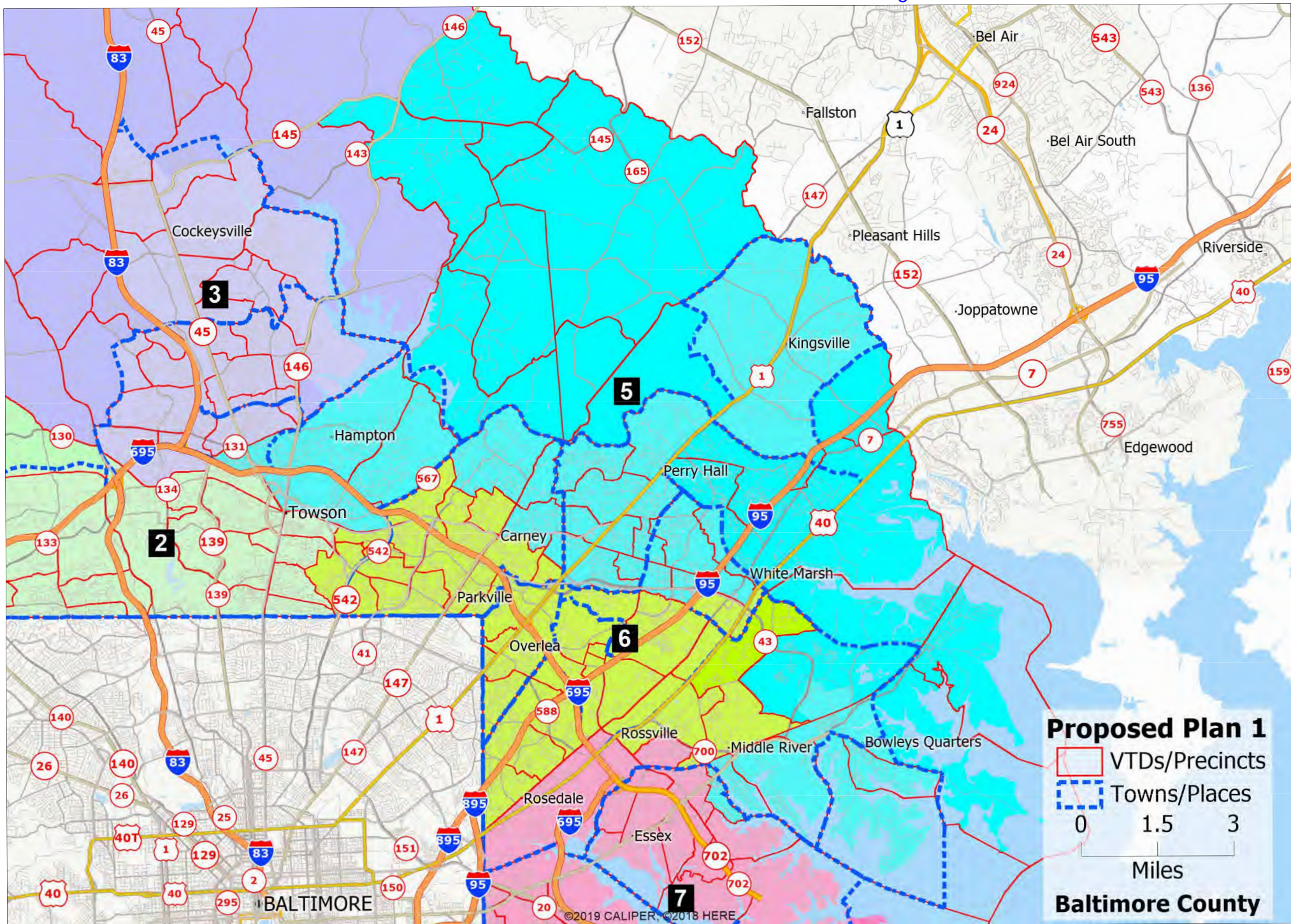
EXHIBIT E-2

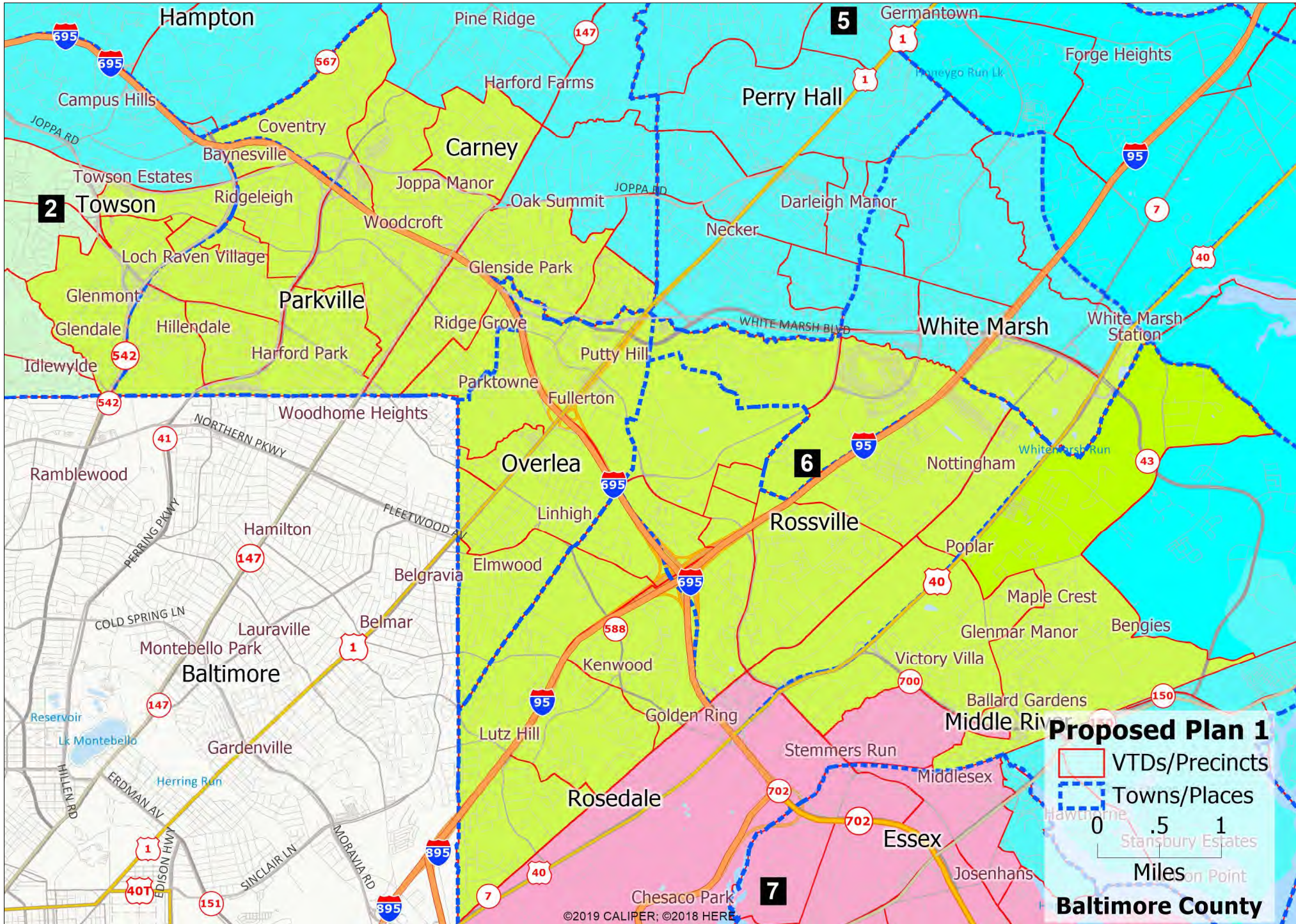


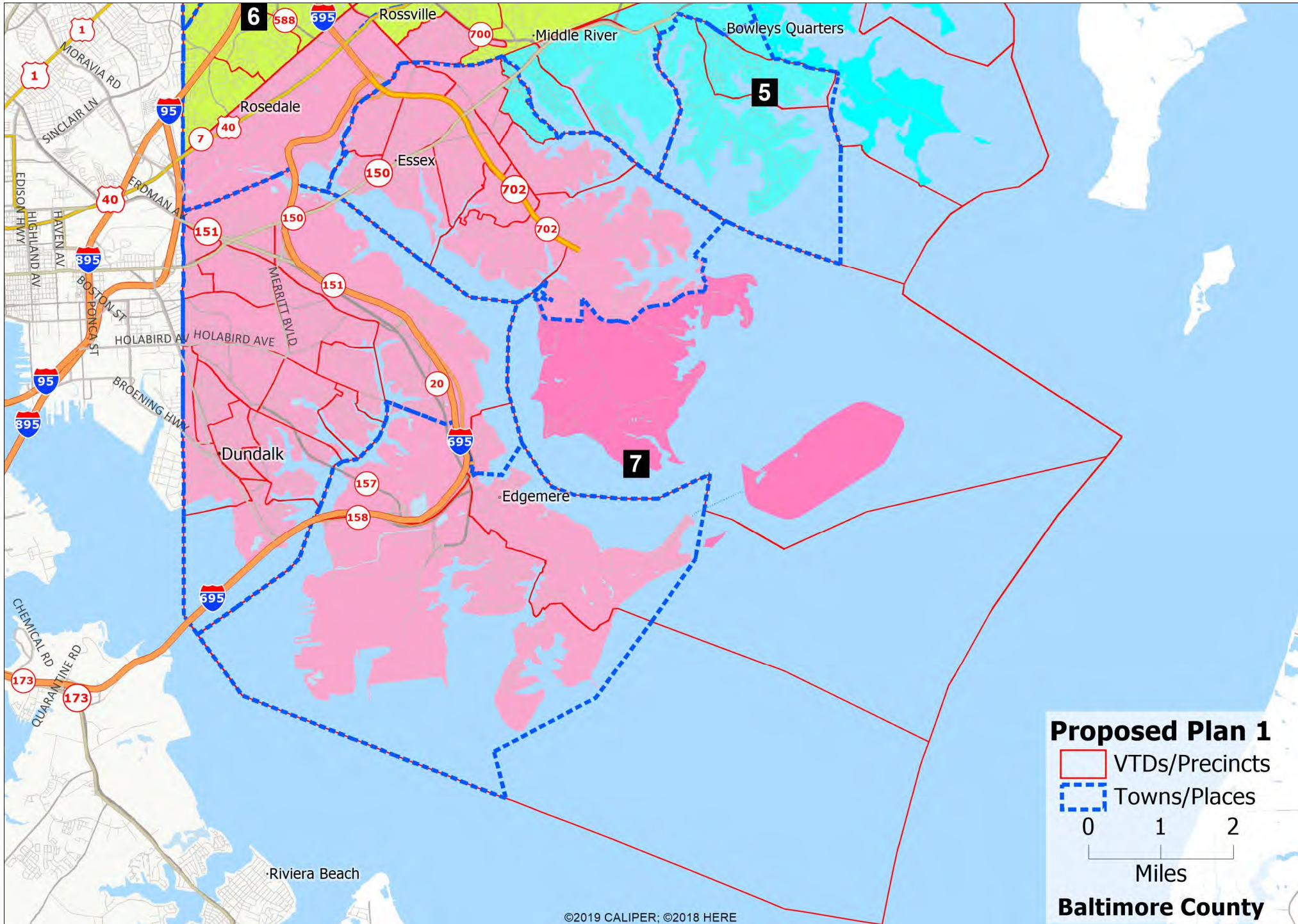












COOPER DECLARATION

EXHIBIT E-3

**Population Summary Report (2020 Census) -- 2020 VTD level
Baltimore County Council --Proposed Plan 1**

District	Adusted Population	Deviation	% Deviation	2020 Population	Any Part Black	% Any Part Black	Single-race Black	% Single- race Black	Latino	% Latino	NH White	% NH White
1	123487	1105	0.90%	123009	68644	55.80%	65339	53.12%	10483	8.52%	34980	28.44%
2	124871	2489	2.03%	124715	31347	25.13%	28793	23.09%	9454	7.58%	74540	59.77%
3	119713	-2669	-2.18%	119607	16189	13.54%	14395	12.04%	7759	6.49%	83008	69.40%
4	118817	-3565	-2.91%	118532	65331	55.12%	62103	52.39%	6136	5.18%	34587	29.18%
5	124615	2233	1.82%	124450	19281	15.49%	17227	13.84%	5077	4.08%	86205	69.27%
6	120554	-1828	-1.49%	120152	47755	39.75%	44544	37.07%	8873	7.38%	53230	44.30%
7	124616	2234	1.83%	124070	26813	21.61%	23392	18.85%	13710	11.05%	76713	61.83%
Total	856673		4.94%	854535	275360	32.22%	255793	29.93%	61492	7.20%	443263	51.87%

District	18+_Pop	18+_AP Black	% 18+_AP Black	18+_NH AP Black	% 18+_NH AP Black	18+ Latino	% 18+ Latino	18+_NH AP Asian	_NH AP Asian	18+_NH White	% 18+_NH White
1	95862	52561	54.83%	51965	54.21%	6802	7.10%	5958	6.22%	29763	31.05%
2	98207	23825	24.26%	23291	23.72%	6386	6.50%	6269	6.38%	60919	62.03%
3	94362	11667	12.36%	11336	12.01%	5076	5.38%	7979	8.46%	68290	72.37%
4	93414	50349	53.90%	49639	53.14%	4235	4.53%	8984	9.62%	29294	31.36%
5	99050	13366	13.49%	13030	13.15%	3370	3.40%	8536	8.62%	71960	72.65%
6	92918	33545	36.10%	32967	35.48%	5864	6.31%	6780	7.30%	45489	48.96%
7	95698	18134	18.95%	17585	18.38%	8456	8.84%	2393	2.50%	63851	66.72%
Total	669511	203447	30.39%	199813	29.84%	40189	6.00%	46899	7.00%	369566	55.20%

District	% NH Single- Race Black CVAP*	% Latino CVAP	% NH Single- Race Asian CVAP*
1	71.08%	2.37%	5.16%
2	29.25%	3.85%	5.67%
3	16.07%	2.74%	8.75%
4	71.18%	1.80%	8.02%
5	15.10%	1.86%	7.70%
6	45.30%	3.37%	6.97%
7	24.77%	3.10%	2.19%

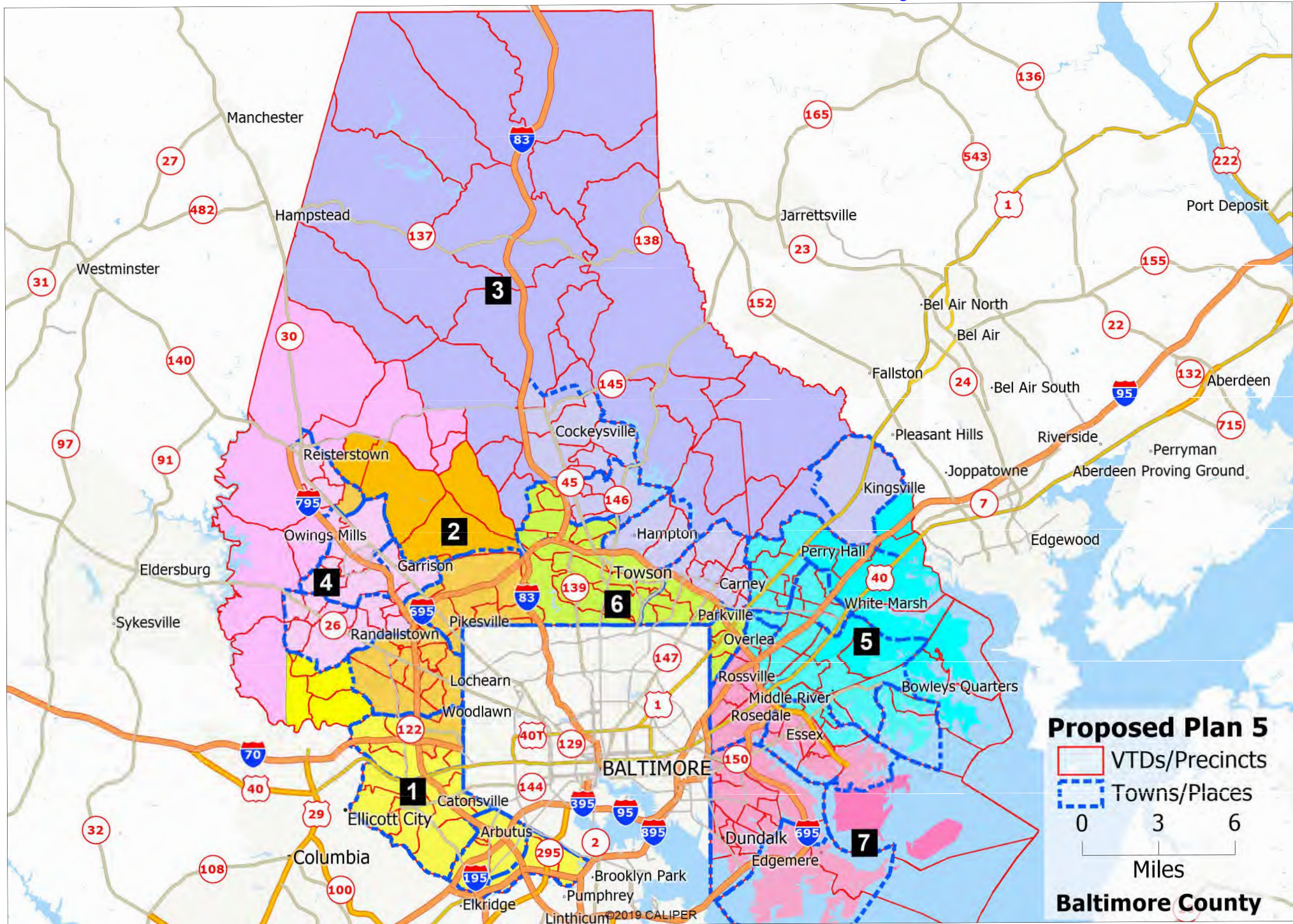
Note: Citizen Voting Age Population (CVAP) percentages are disaggregated from block-group level ACS estimates (with a survey midpoint of July 2017)

Source for CVAP disaggregation: Redistricting Data Hub

<https://redistrictingdatahub.org/dataset/maryland-cvap-data-disaggregated-to-the-2020-block-level-2019/>

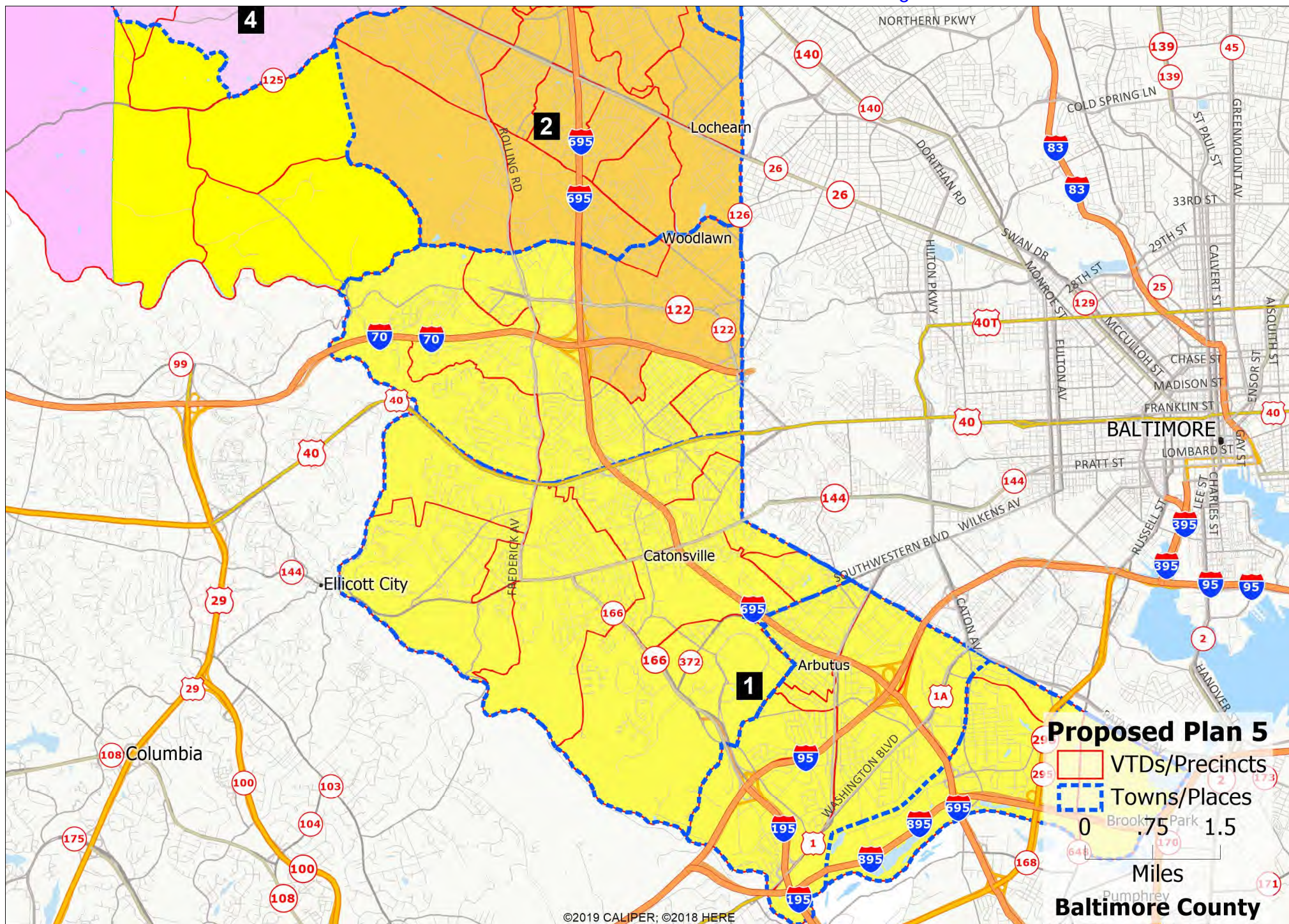
COOPER DECLARATION

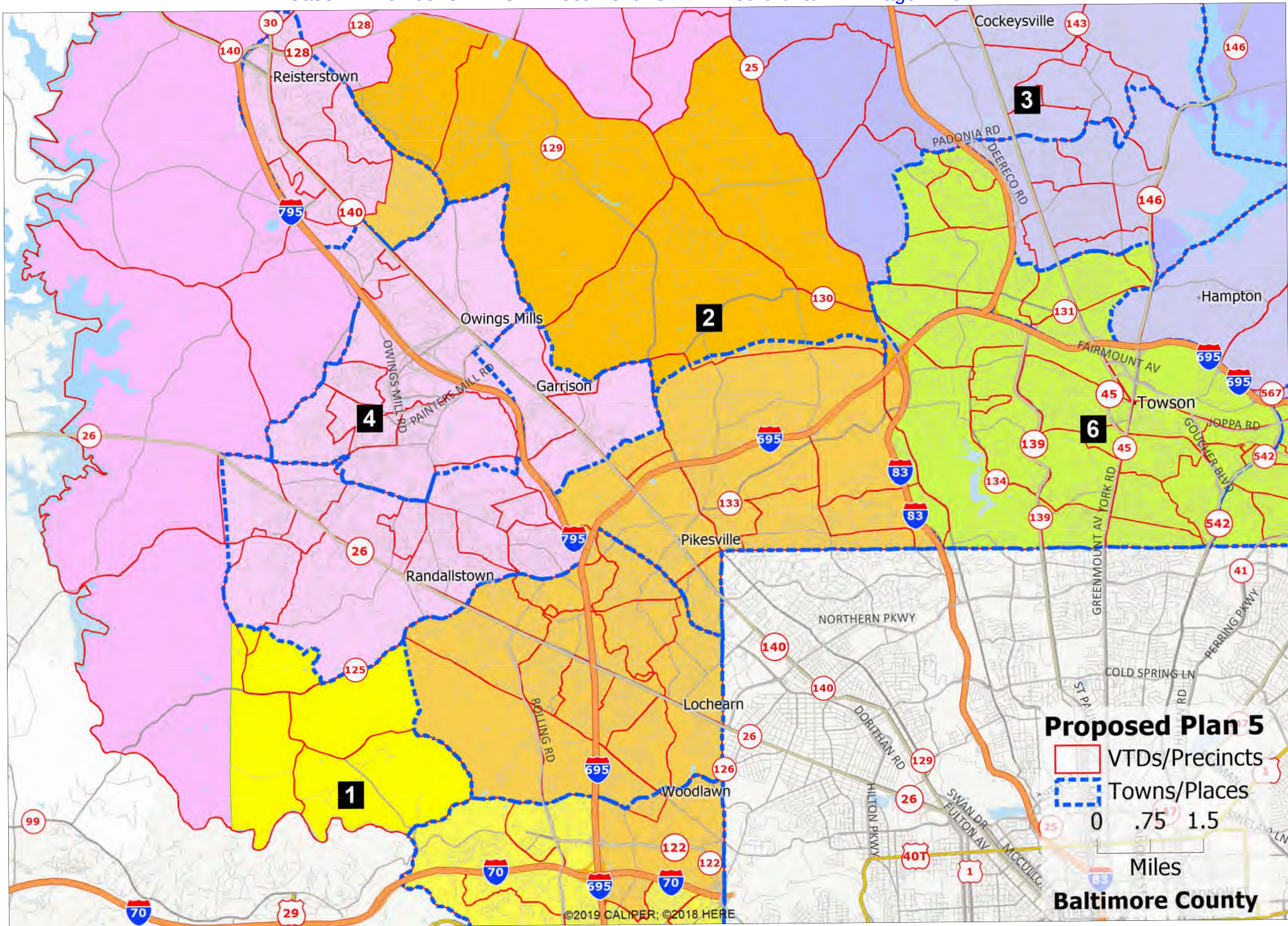
EXHIBIT F-1

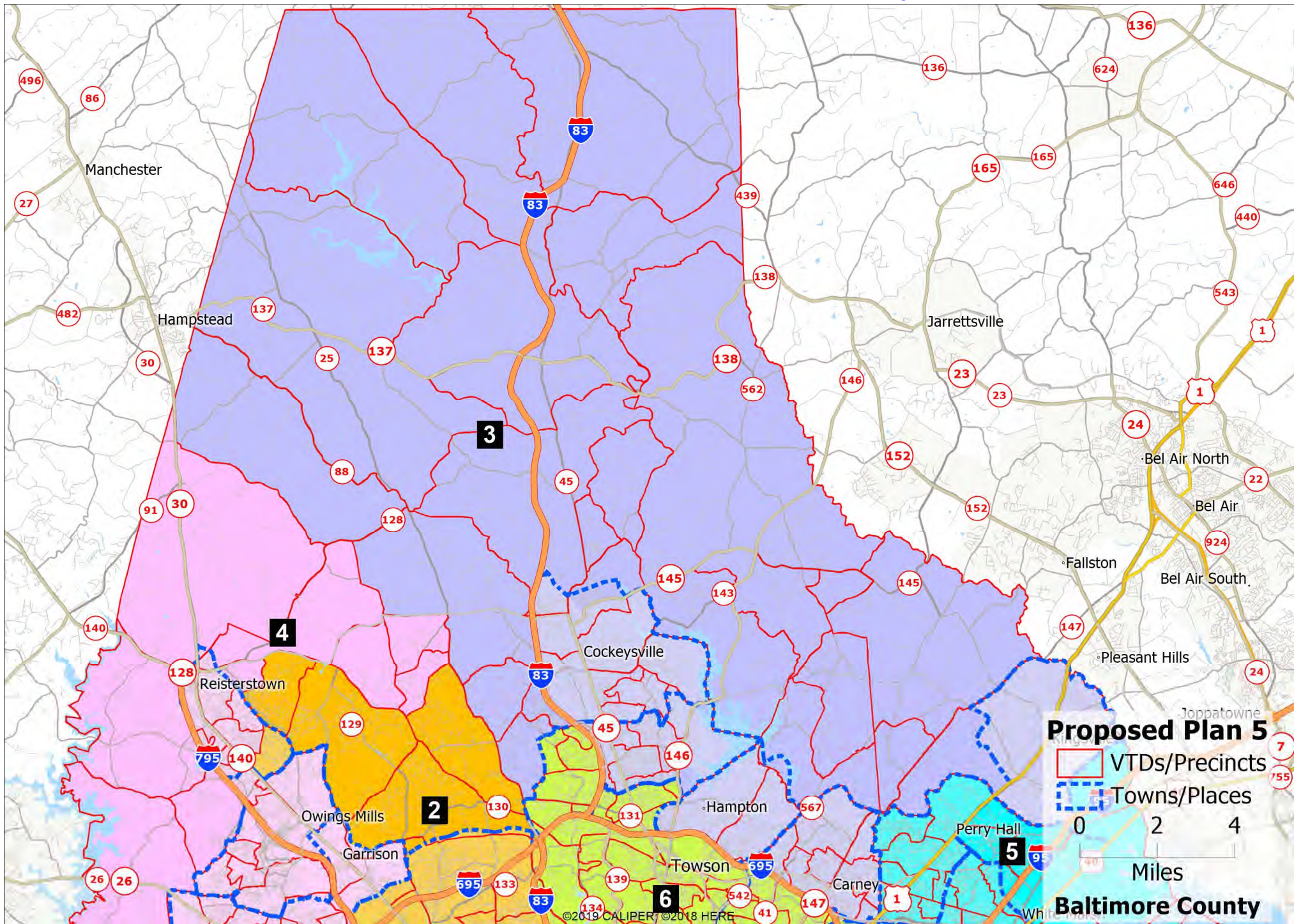


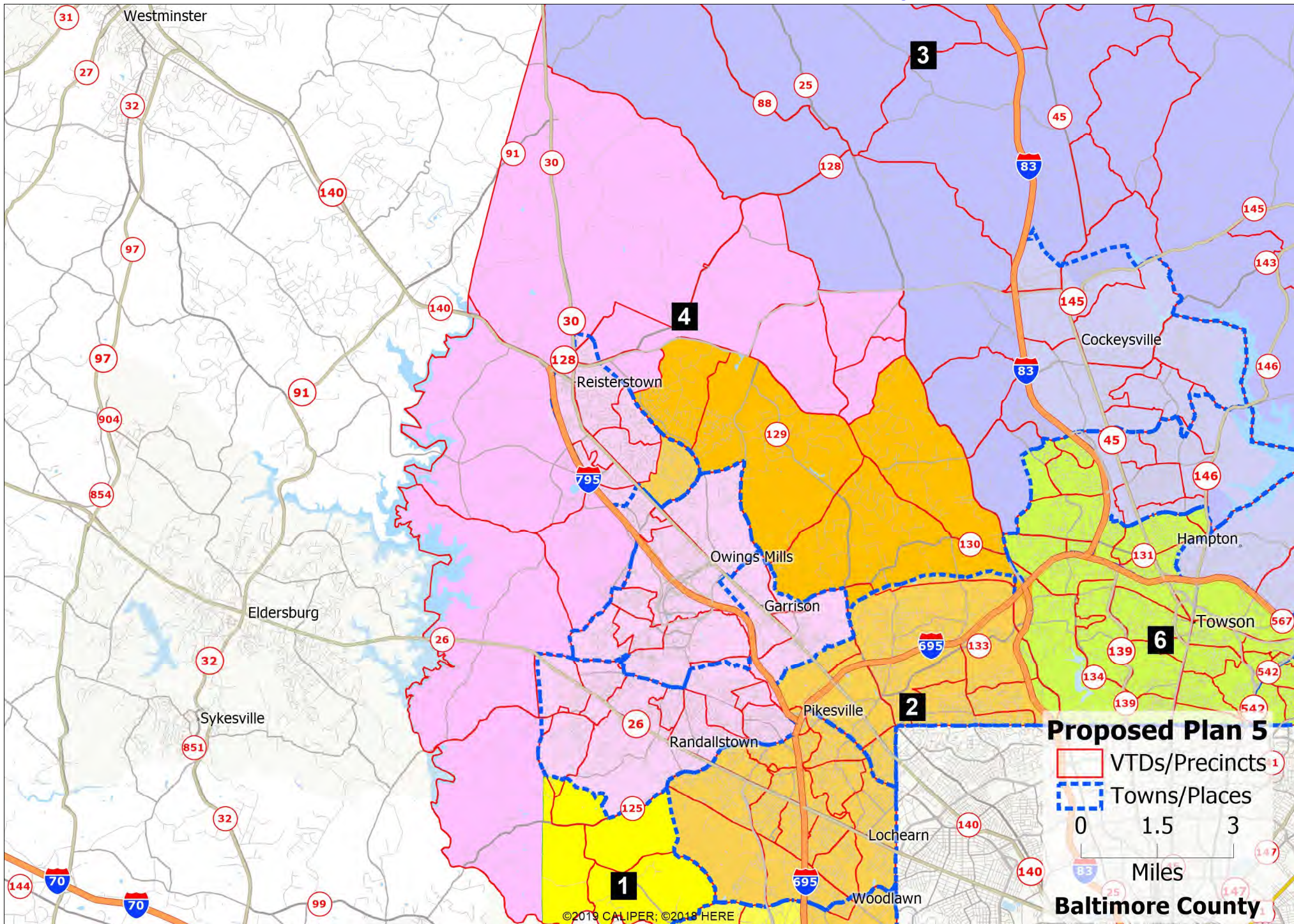
COOPER DECLARATION

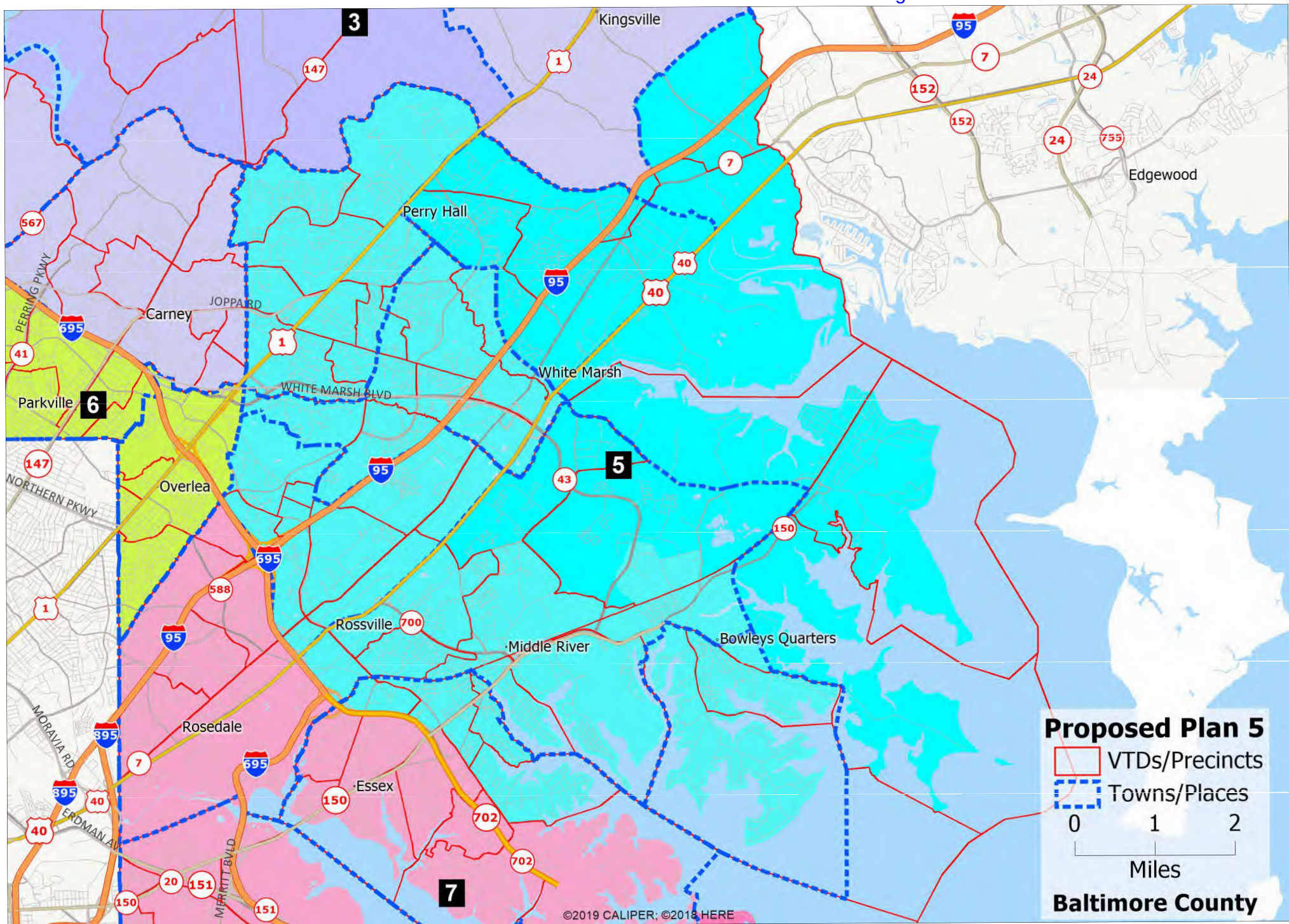
EXHIBIT F-2

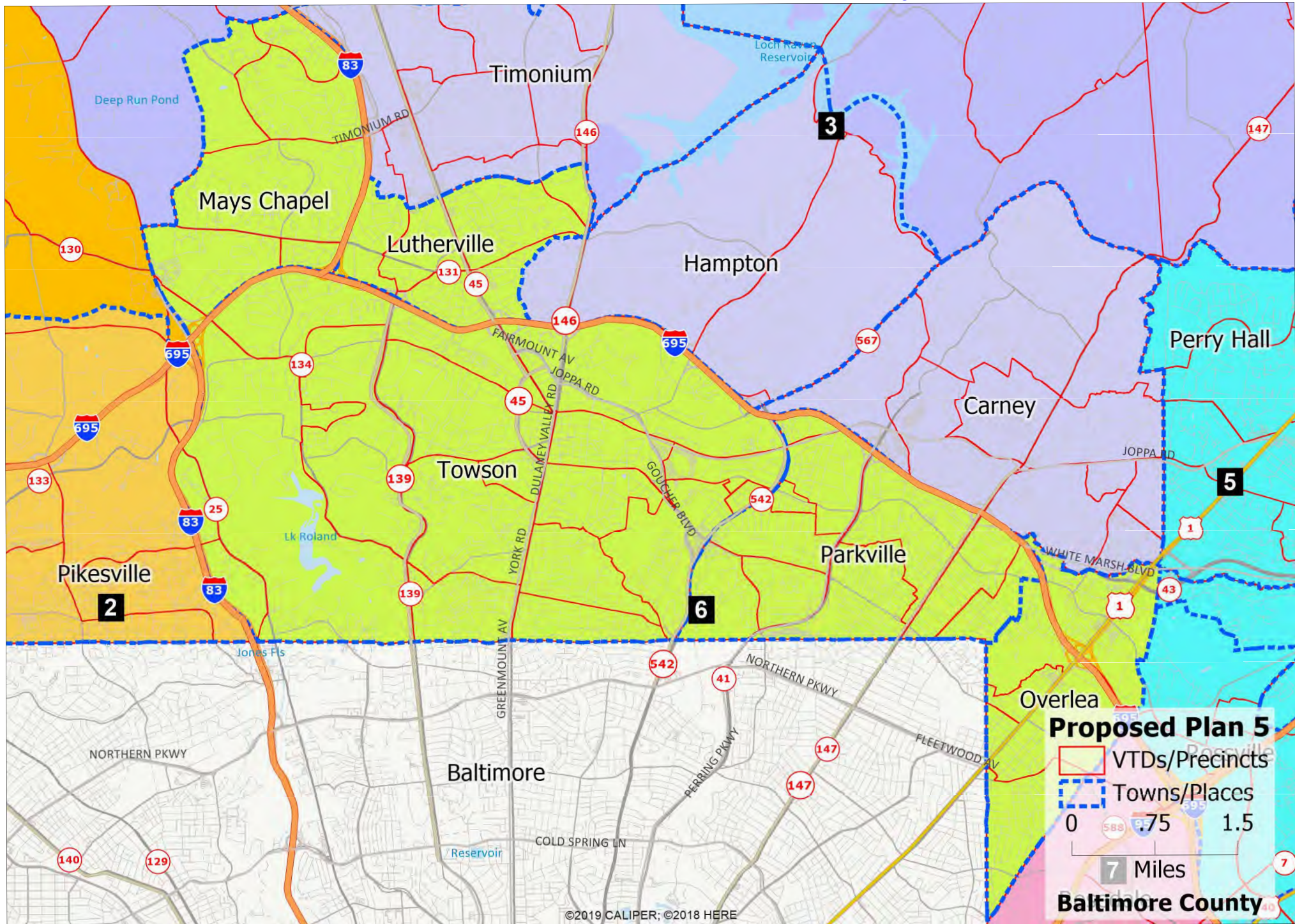


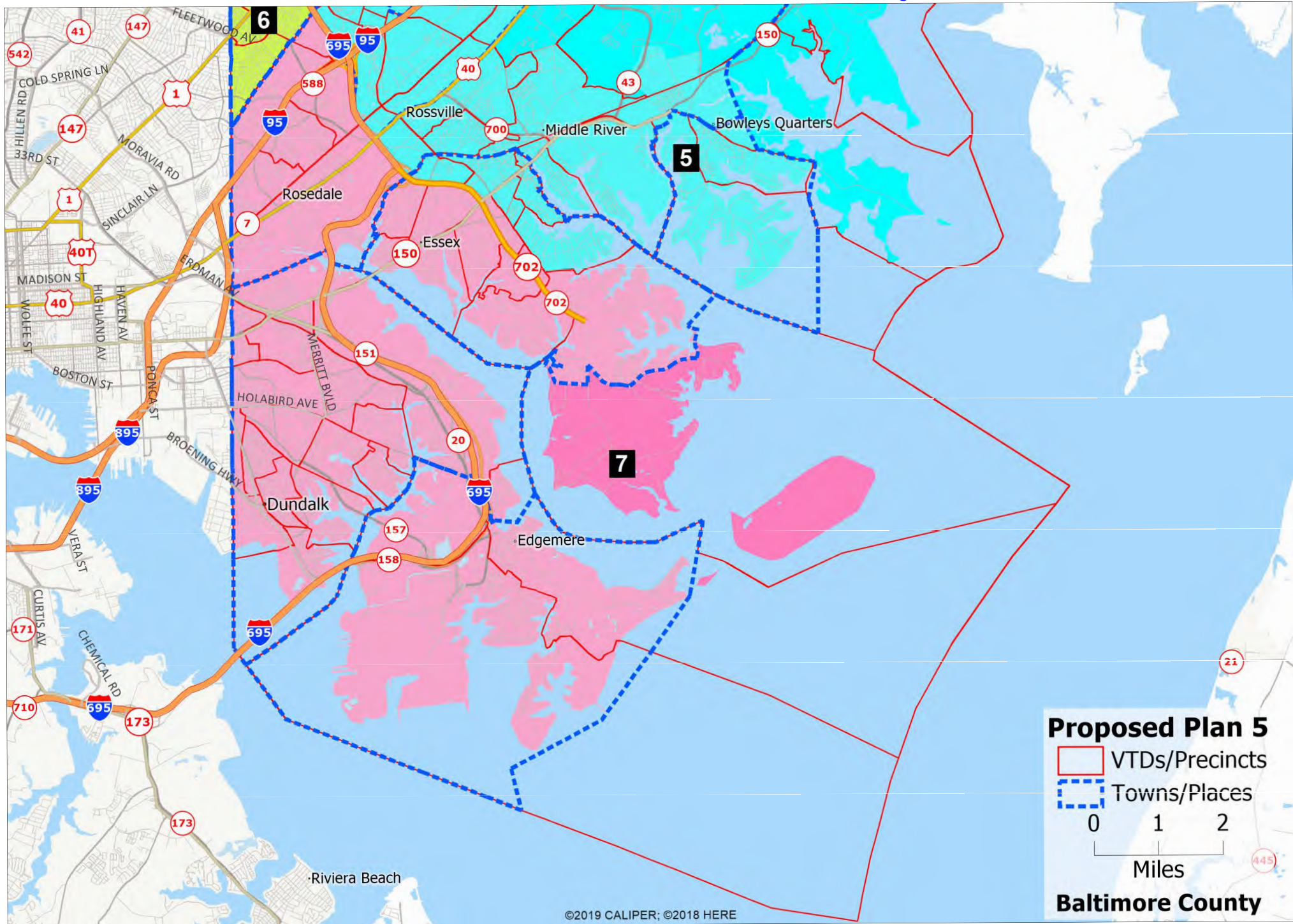












COOPER DECLARATION

EXHIBIT F-3

**Population Summary Report (2020 Census) -- 2020 VTD level
Baltimore County Council --Proposed Plan 5**

District	Adusted Population	Deviation	% Deviation	2020 Population	Any Part Black	% Any Part Black	Single-race Black	% Single- race Black	Latino	% Latino	NH White	% NH White
1	117582	-4800	-3.92%	117299	33828	28.84%	31030	26.45%	10029	8.55%	56411	48.09%
2	118013	-4369	-3.57%	117653	65481	55.66%	62722	53.31%	6945	5.90%	39418	33.50%
3	124905	2523	2.06%	124772	14761	11.83%	13100	10.50%	7049	5.65%	91229	73.12%
4	116414	-5968	-4.88%	116127	67261	57.92%	63757	54.90%	8811	7.59%	33180	28.57%
5	127792	5410	4.42%	127490	33170	26.02%	30317	23.78%	7578	5.94%	72163	56.60%
6	123477	1095	0.89%	123256	29228	23.71%	26686	21.65%	7128	5.78%	76014	61.67%
7	128490	6108	4.99%	127938	31631	24.72%	28181	22.03%	13952	10.91%	74848	58.50%
Total	856673		9.87%	854535	275360	32.22%	255793	29.93%	61492	7.20%	443263	51.87%

District	18+_Pop	18+_AP Black	% 18+_AP Black	18+_NH AP Black	% 18+_NH AP Black	18+ Latino	% 18+ Latino	18+_NH AP Asian	_NH AP Asian	18+_NH White	% 18+_NH White
1	91822	25366	27.63%	24900	27.12%	6565	7.15%	11315	12.32%	47183	51.39%
2	91368	50253	55.00%	49691	54.39%	4627	5.06%	4035	4.42%	31991	35.01%
3	98770	10069	10.19%	9789	9.91%	4584	4.64%	7128	7.22%	75332	76.27%
4	91106	51045	56.03%	50314	55.23%	5861	6.43%	5198	5.71%	28747	31.55%
5	98805	22697	22.97%	22241	22.51%	4810	4.87%	8994	9.10%	60384	61.11%
6	98894	22138	22.39%	21584	21.83%	5047	5.10%	7213	7.29%	63497	64.21%
7	98746	21879	22.16%	21294	21.56%	8695	8.81%	3016	3.05%	62432	63.22%
Total	669511	203447	30.39%	199813	29.84%	40189	6.00%	46899	7.00%	369566	55.20%

District	% NH Single- Race Black CVAP*	% Latino CVAP	% NH Single- Race Asian CVAP*
1	37.53%	2.47%	9.73%
2	69.41%	2.40%	4.78%
3	12.82%	2.68%	7.55%
4	72.78%	2.71%	4.91%
5	26.33%	2.70%	8.75%
6	24.90%	3.18%	6.29%
7	29.88%	2.88%	2.62%

Note: Citizen Voting Age Population (CVAP) percentages are disaggregated from block-group level ACS estimates (with a survey midpoint of July 2017)

Source for CVAP disaggregation: Redistricting Data Hub

<https://redistrictingdatahub.org/dataset/maryland-cvap-data-disaggregated-to-the-2020-block-level-2019/>

COOPER DECLARATION

EXHIBIT G-1

Selected Socio-Economic Data

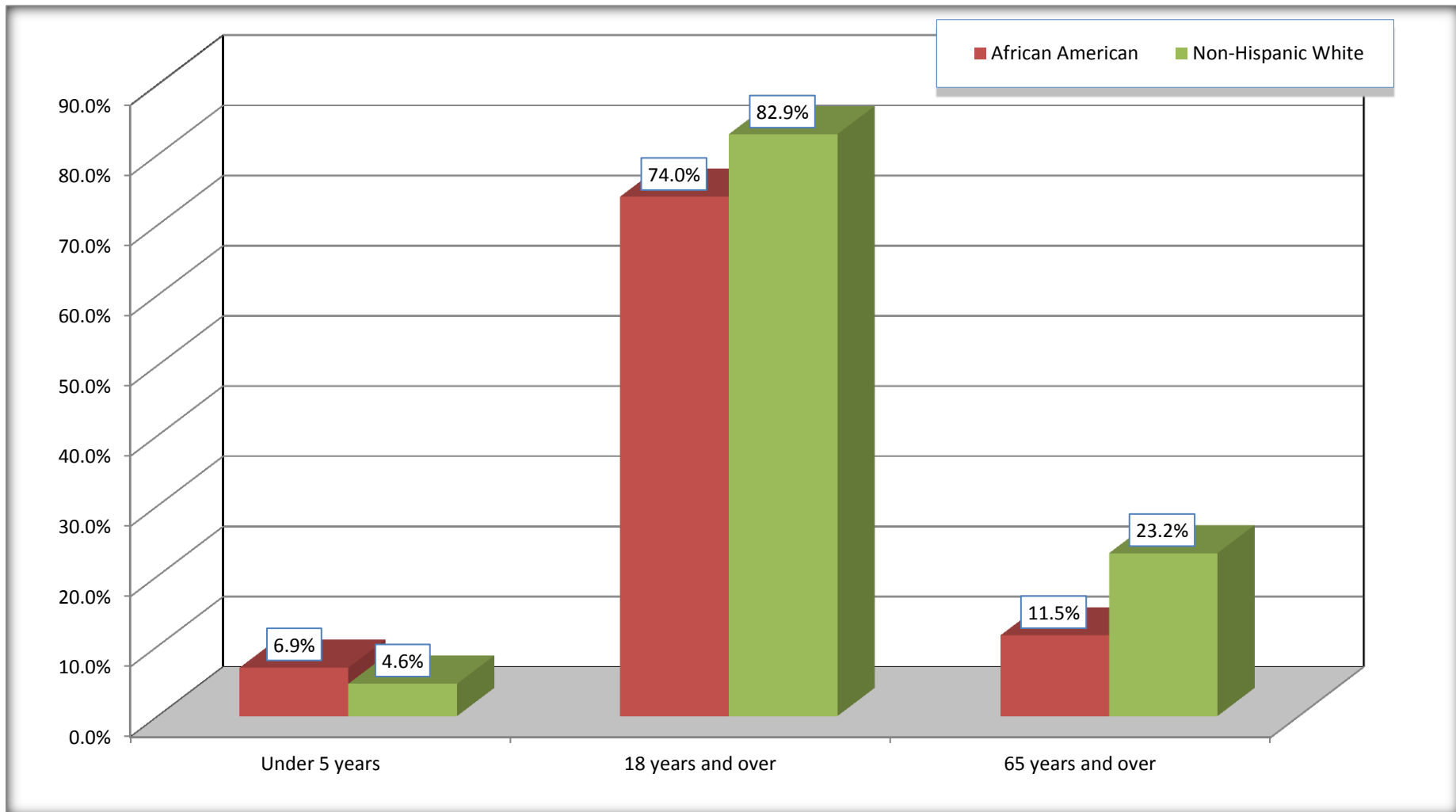
Baltimore County, Maryland

Any Part African American vis-à-vis NH White

Data Set: 2019 American Community Survey 1-Year Estimates

Population by Age

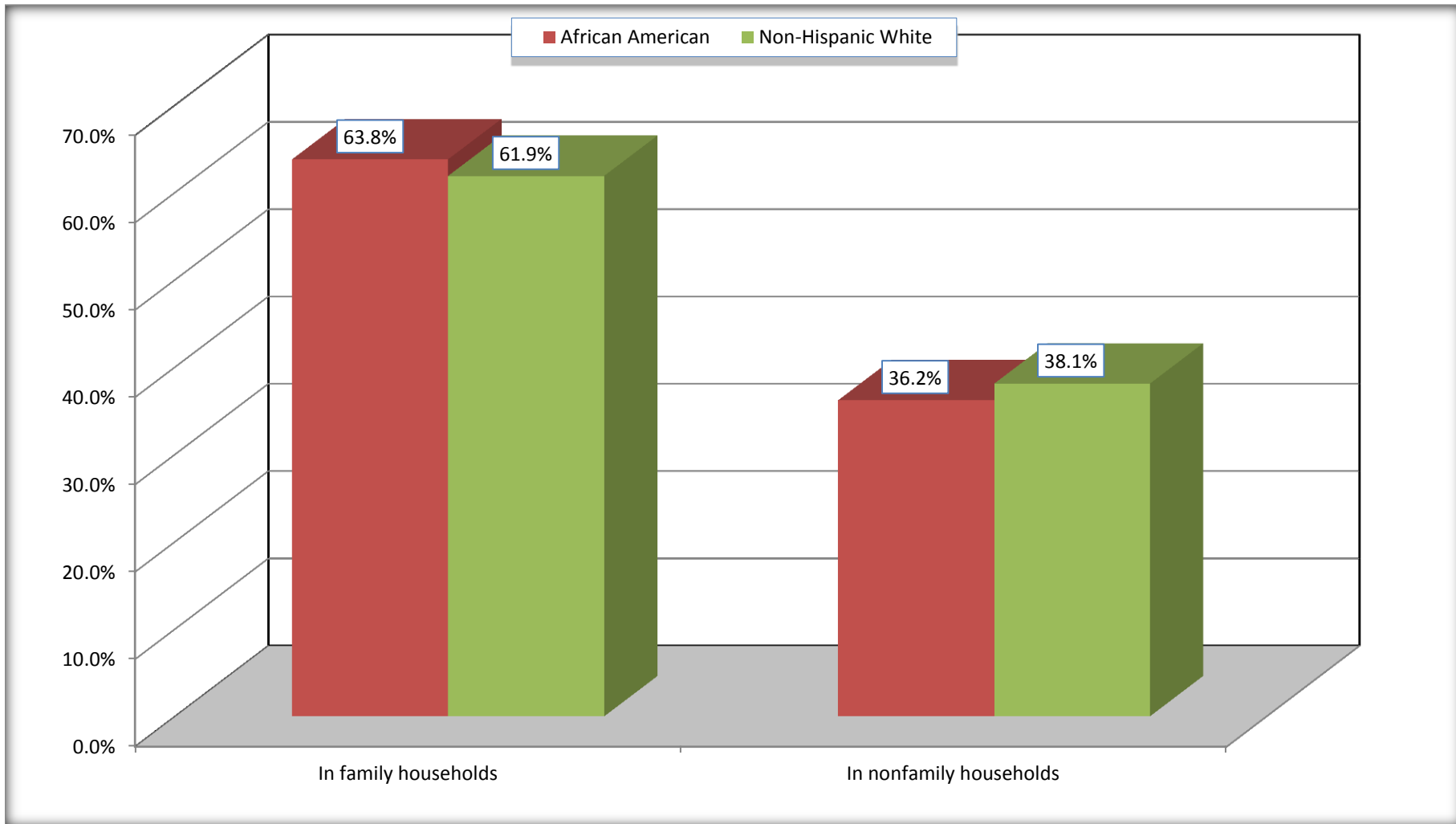
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Household Type for Population in Households

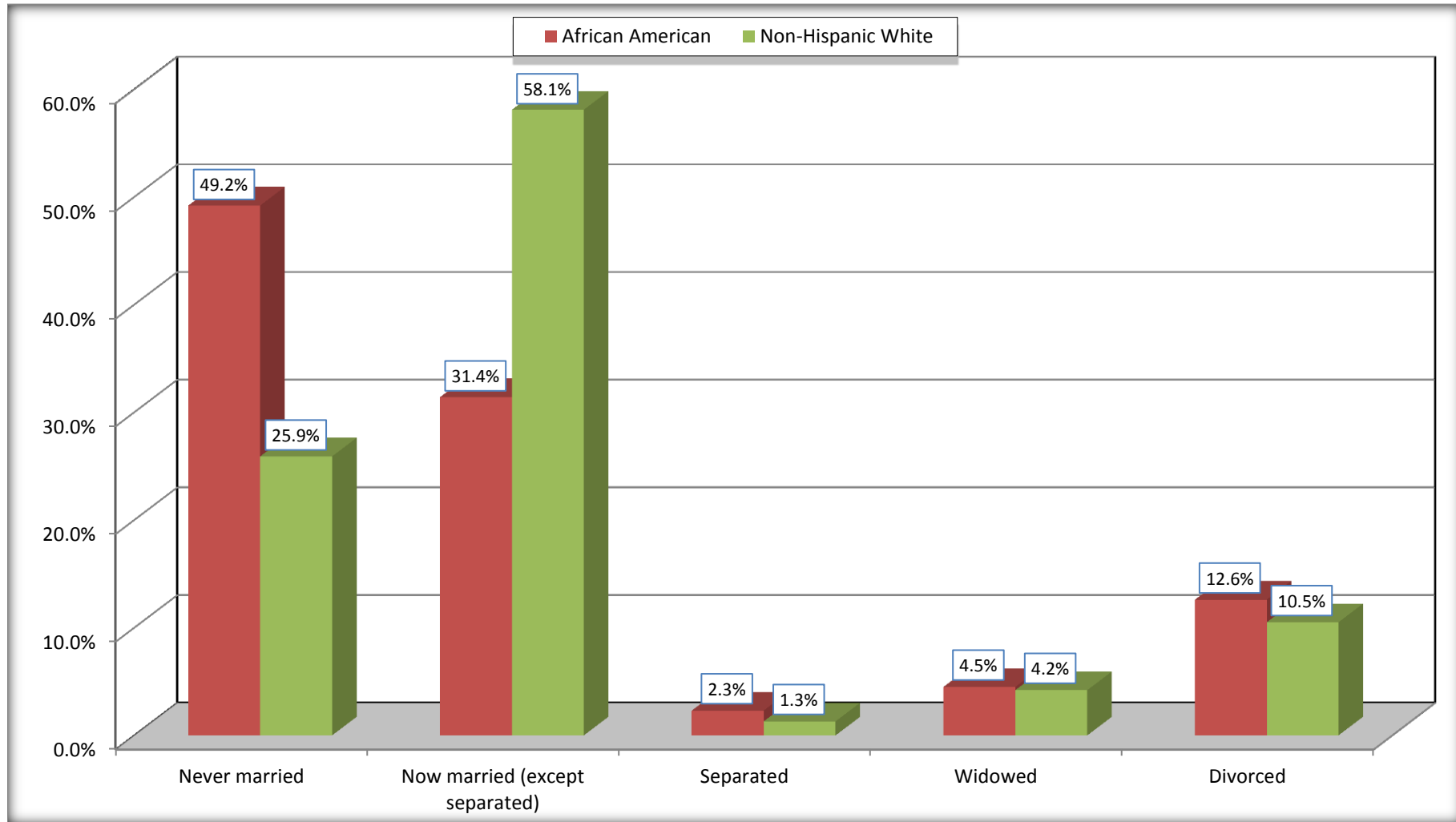
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Marital Status for the Population 15 Years and Over

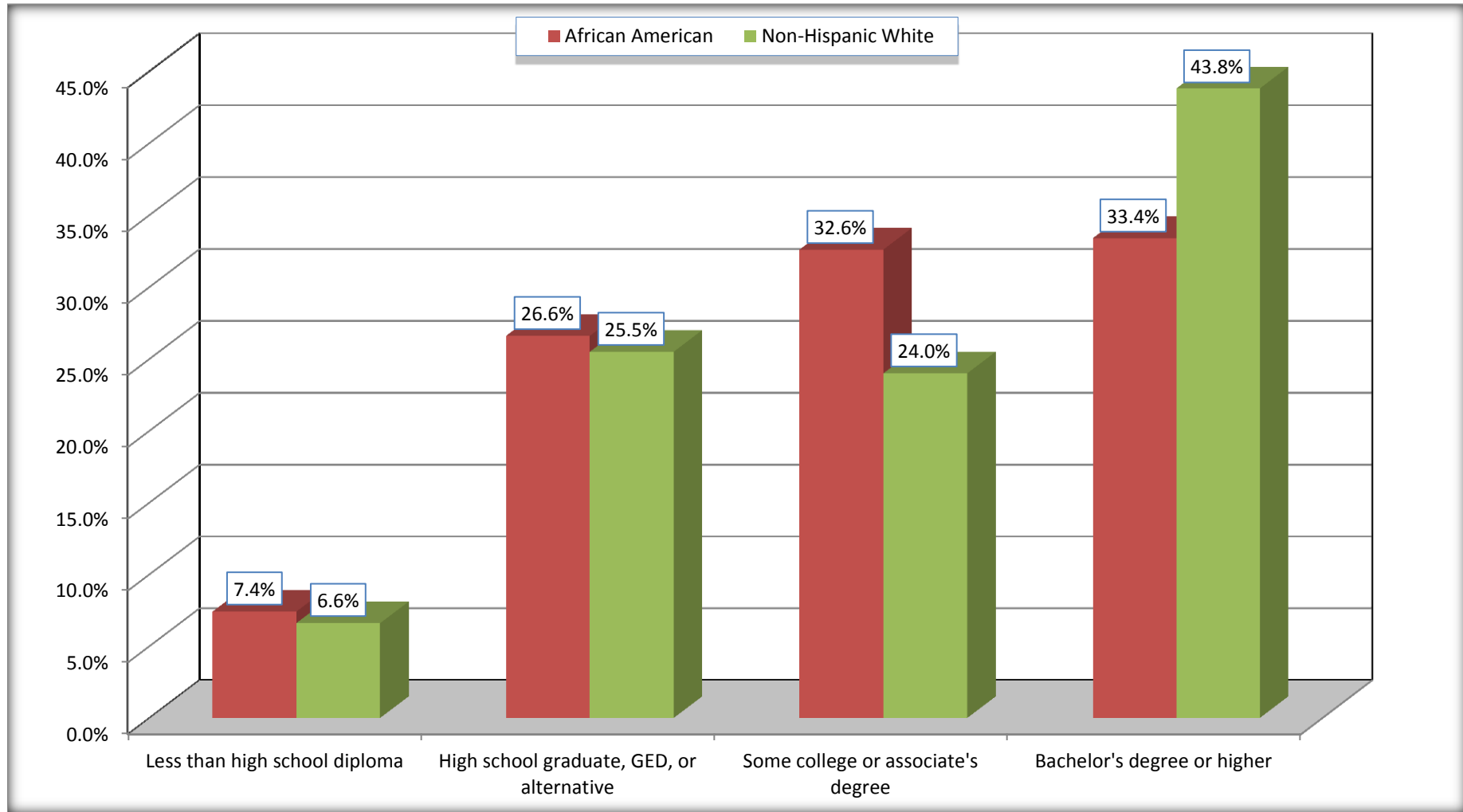
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

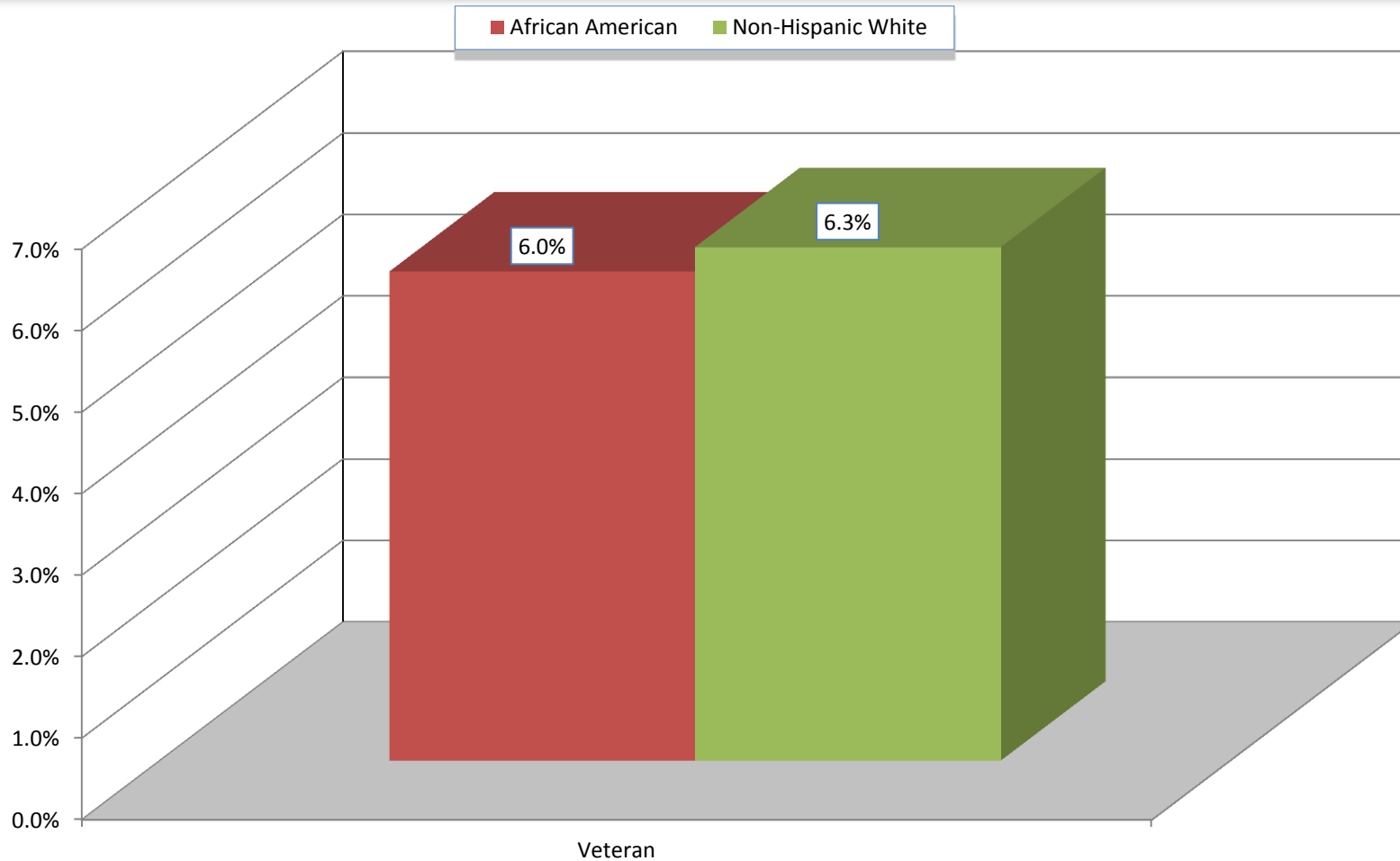
Educational Attainment for the Population 25 Years and Older

Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

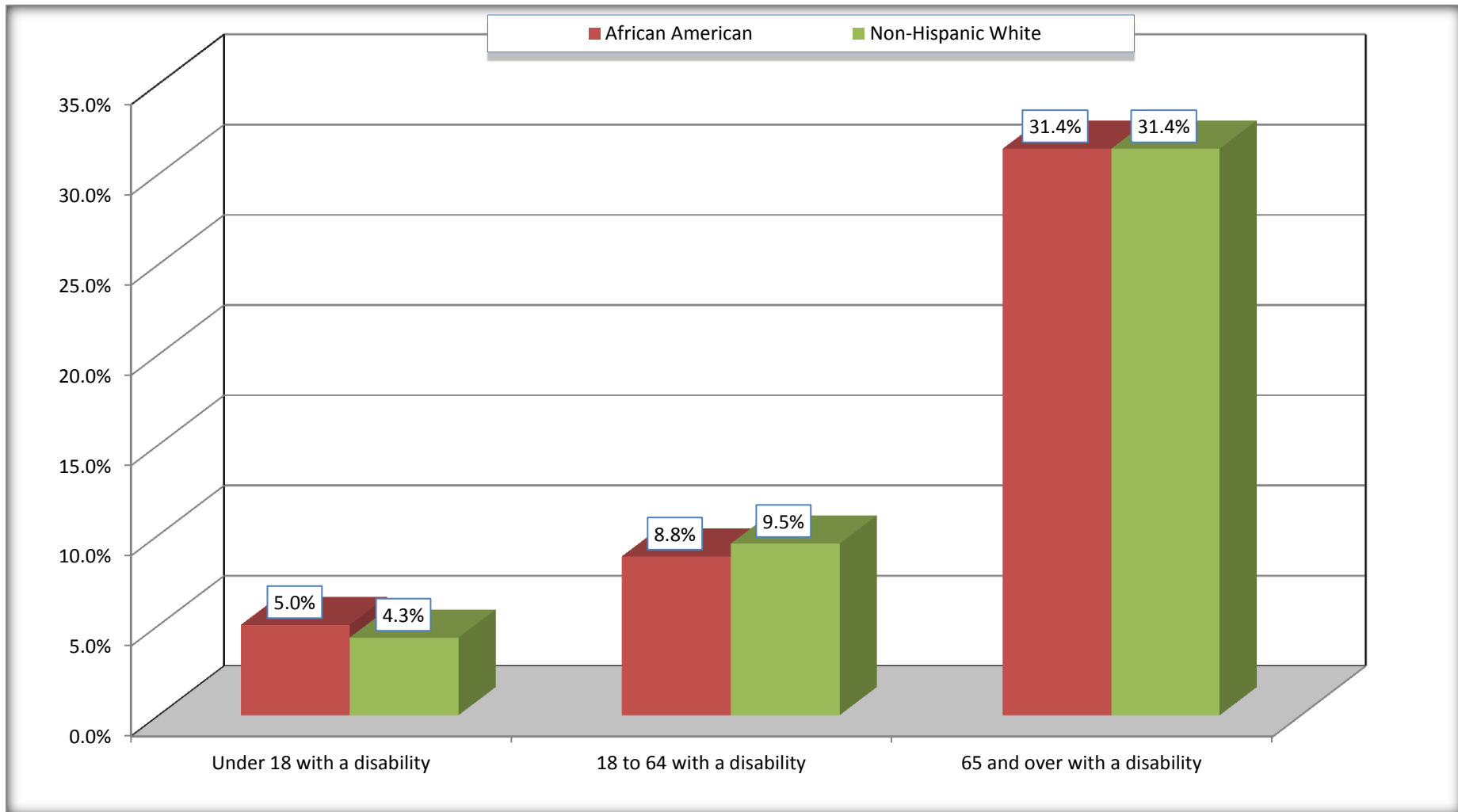
Veterans in the Civilian Population 18 Years and Over
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Disability by Age -- Civilian Noninstitutionalized Population

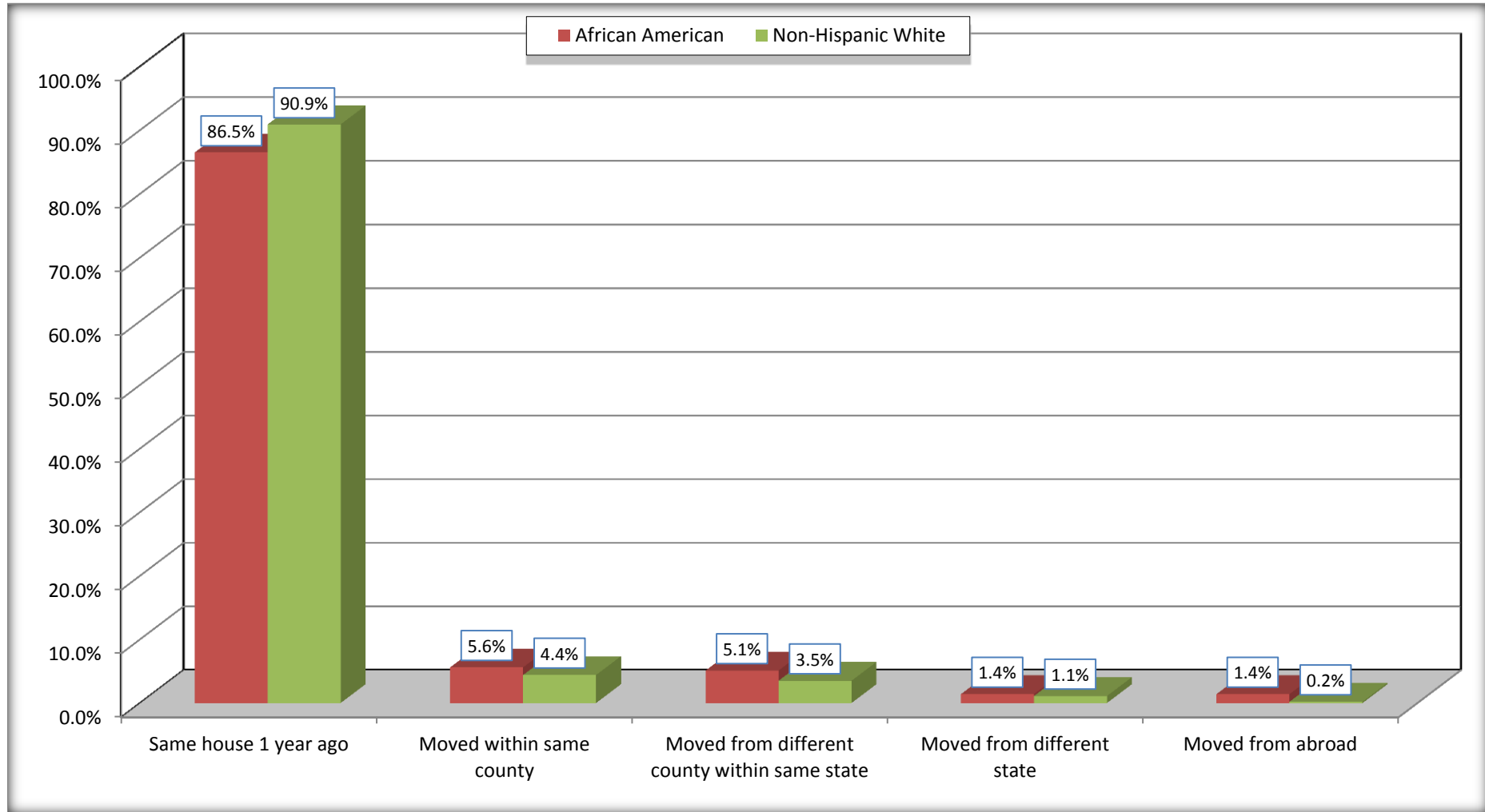
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Geographical Mobility in the Past Year (Population 1 Year and Over)

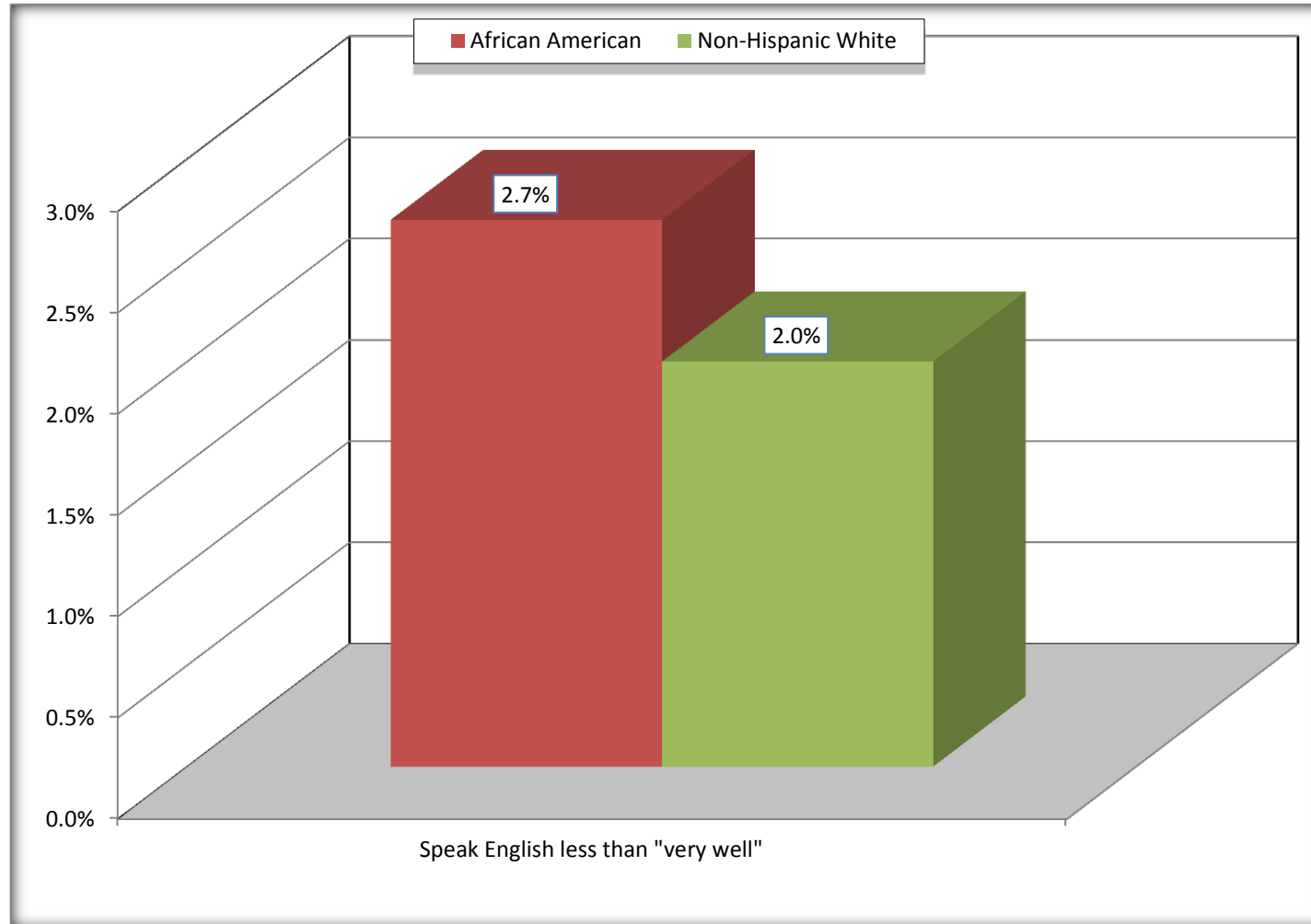
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Speak English Less than "Very Well" (Population 5 Years and Over)

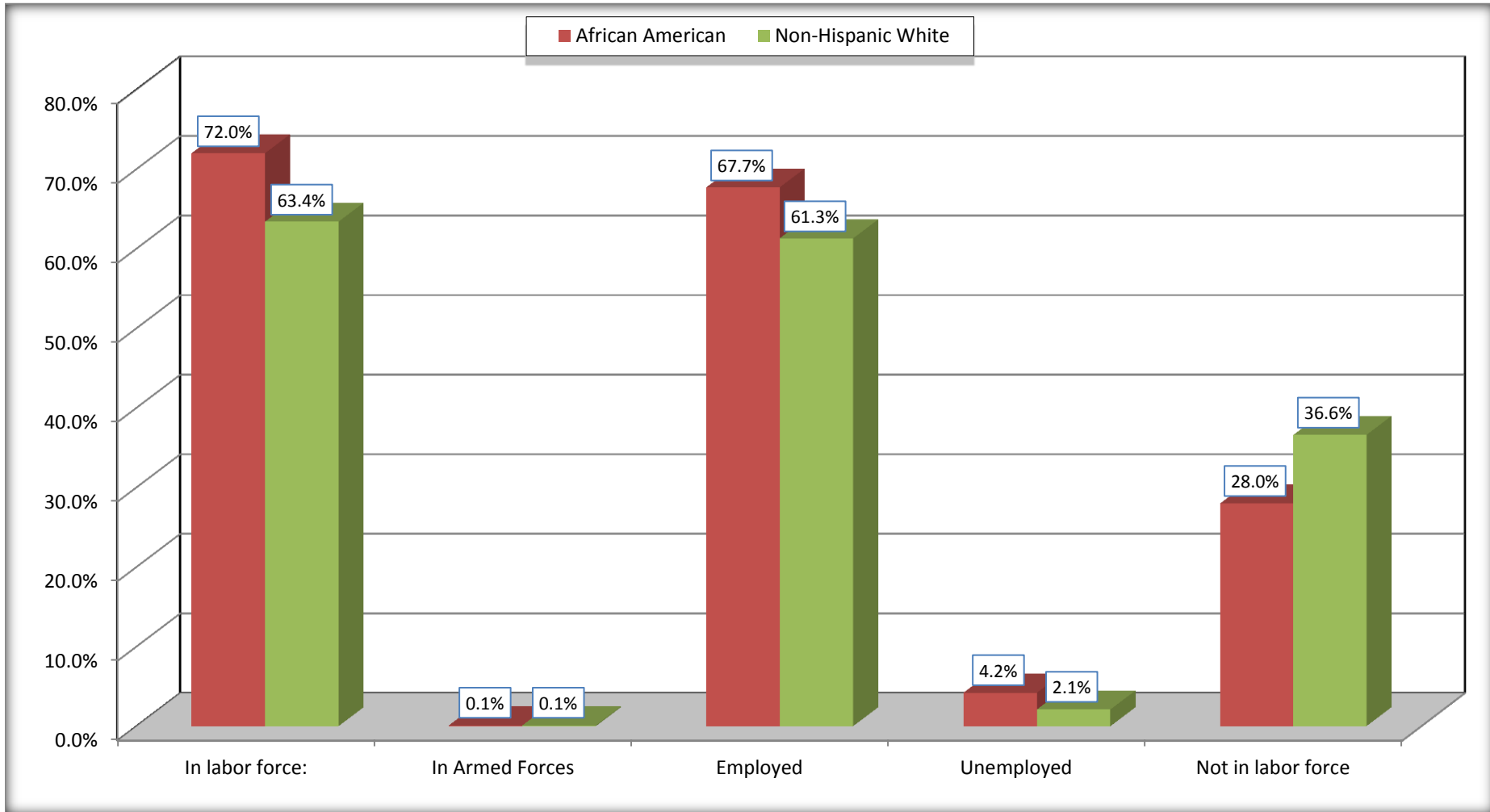
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

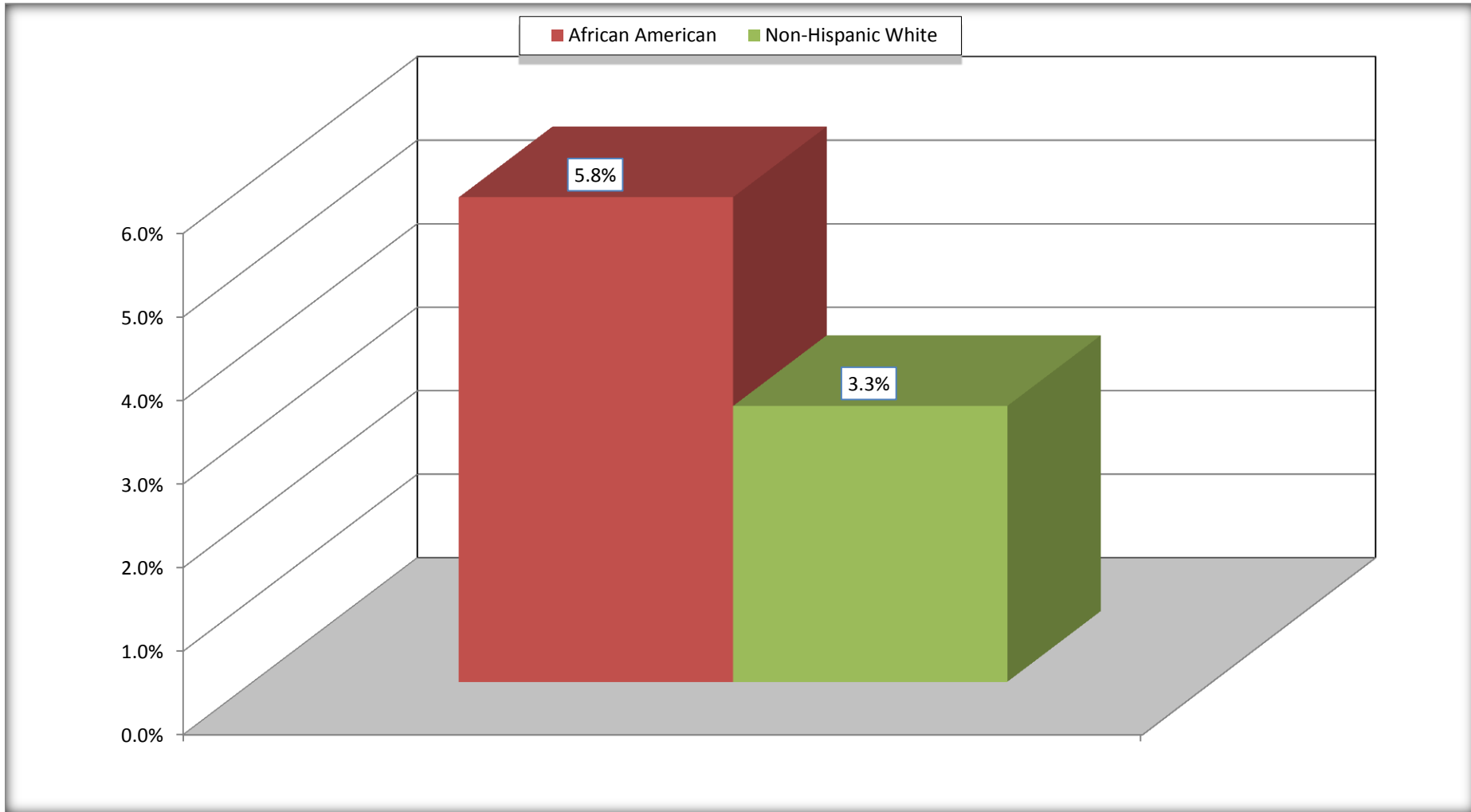
Employment Status for the Population 16 years and over

Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

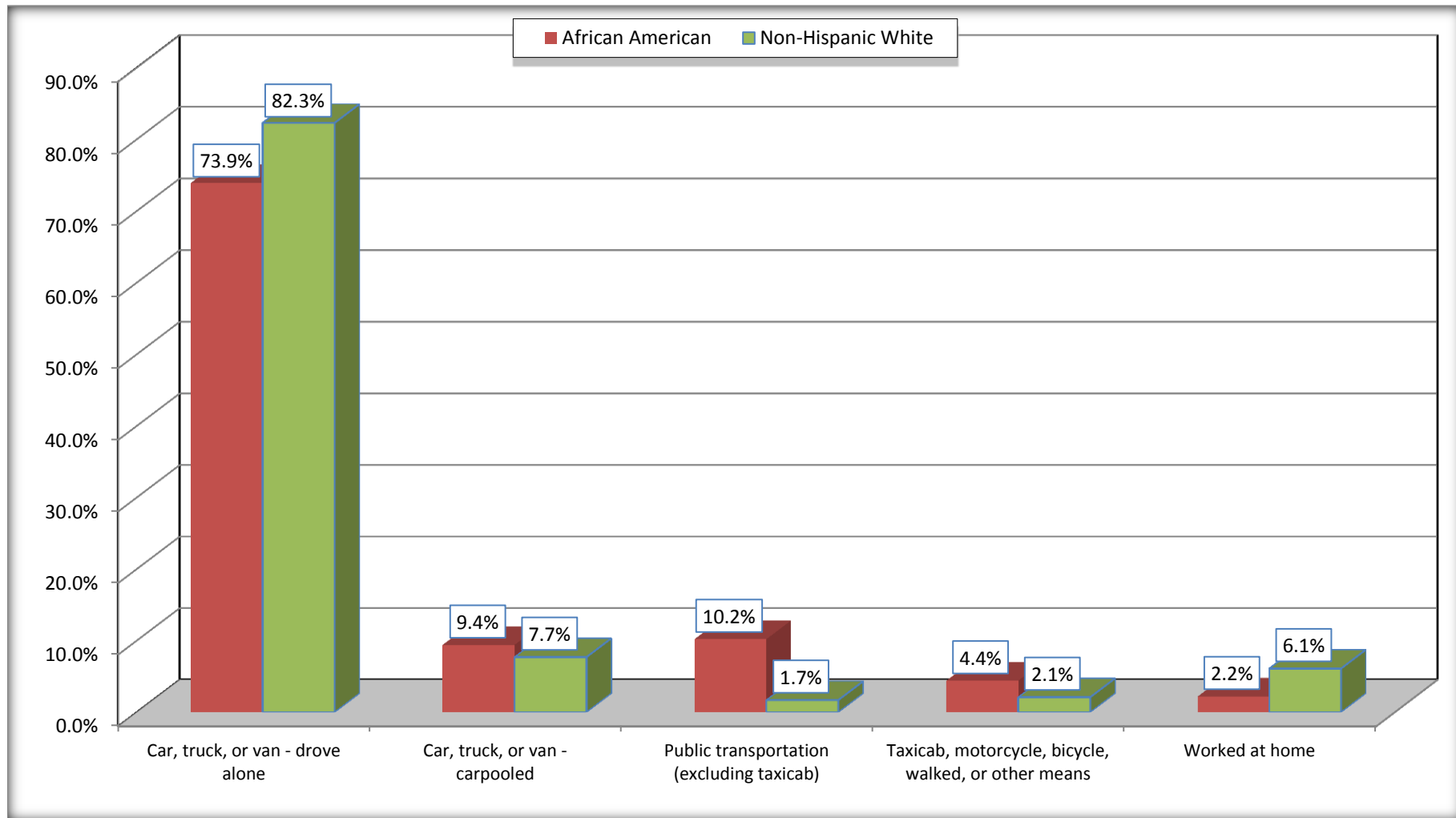
Unemployment (Civilian Labor Force -- Ages 16 and Over)
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

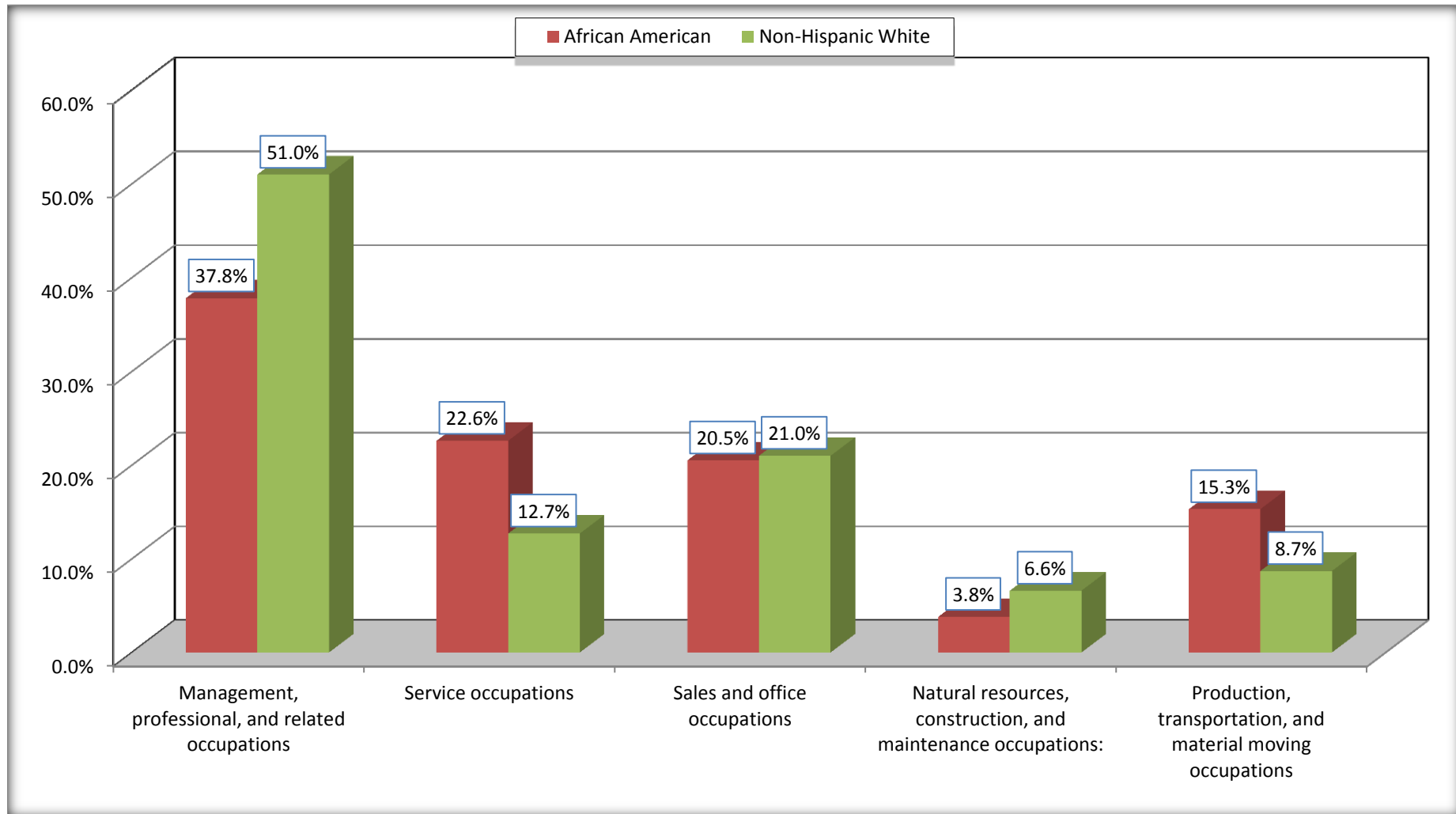
Means of Transportation to Work (Workers 16 Years and Over)

Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

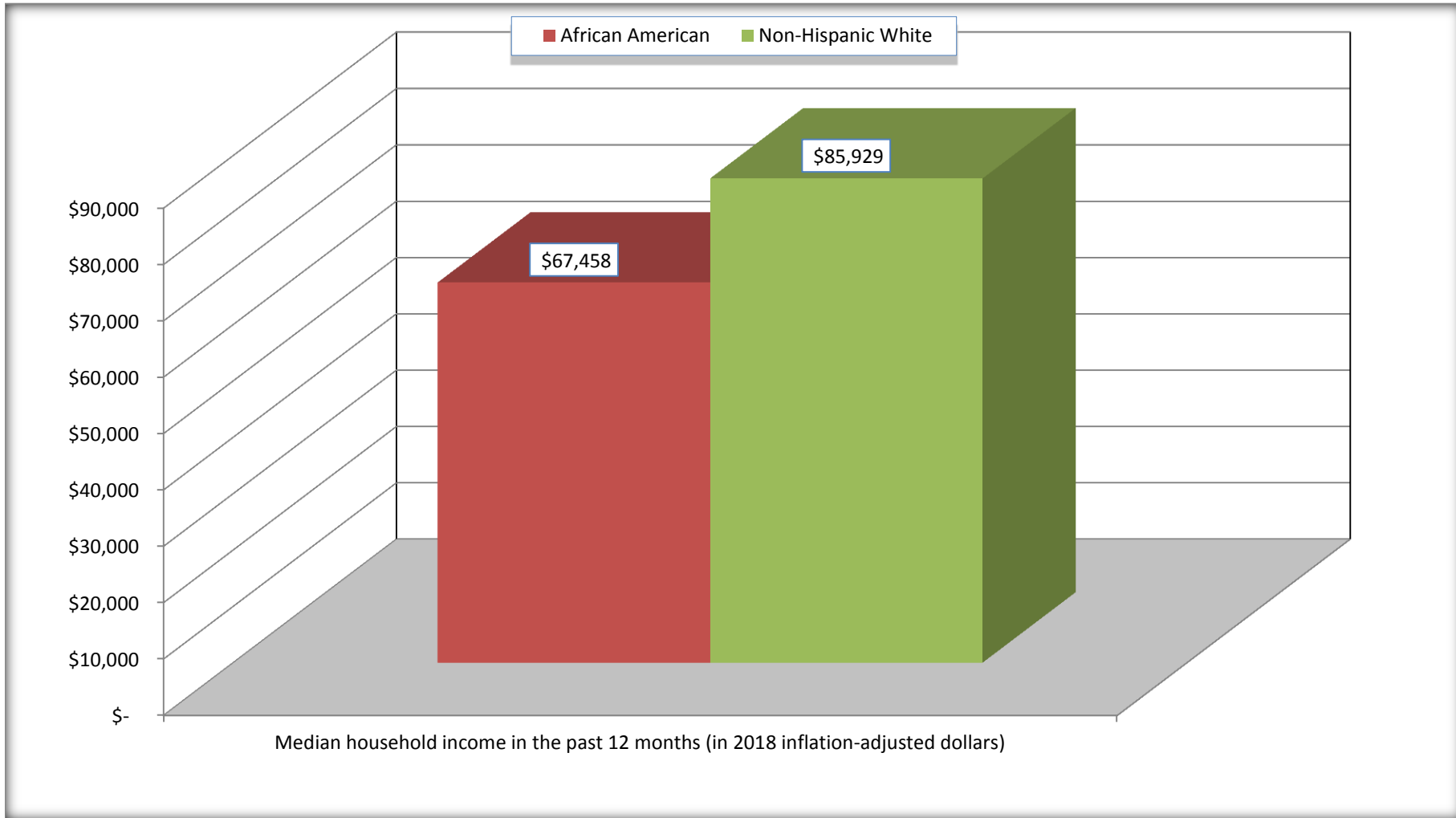
Occupation for the Civilian Employed 16 Years and Over Population Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Median Household Income in the Past 12 Months

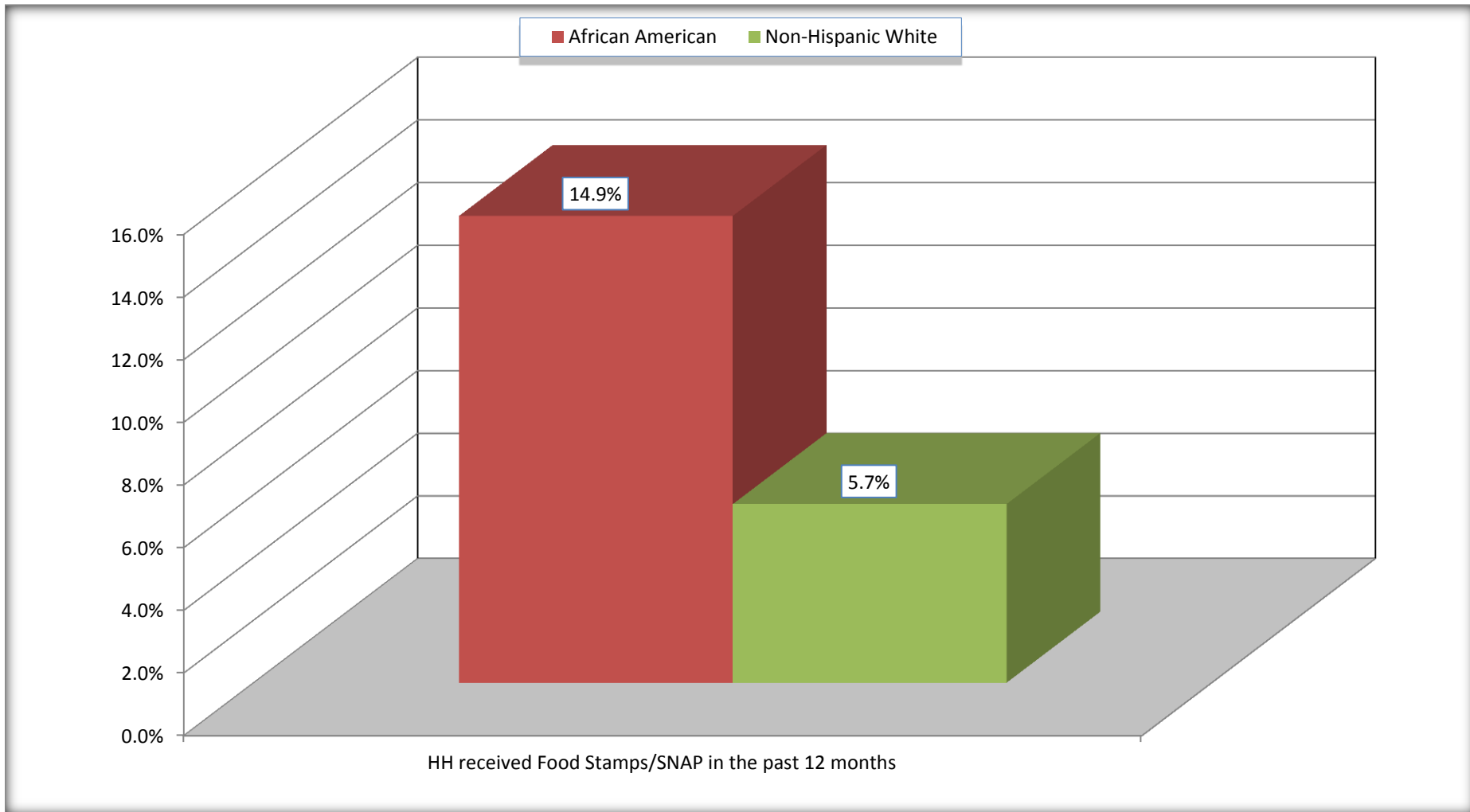
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Receipt of Food Stamps/SNAP in the Past 12 Months by Household

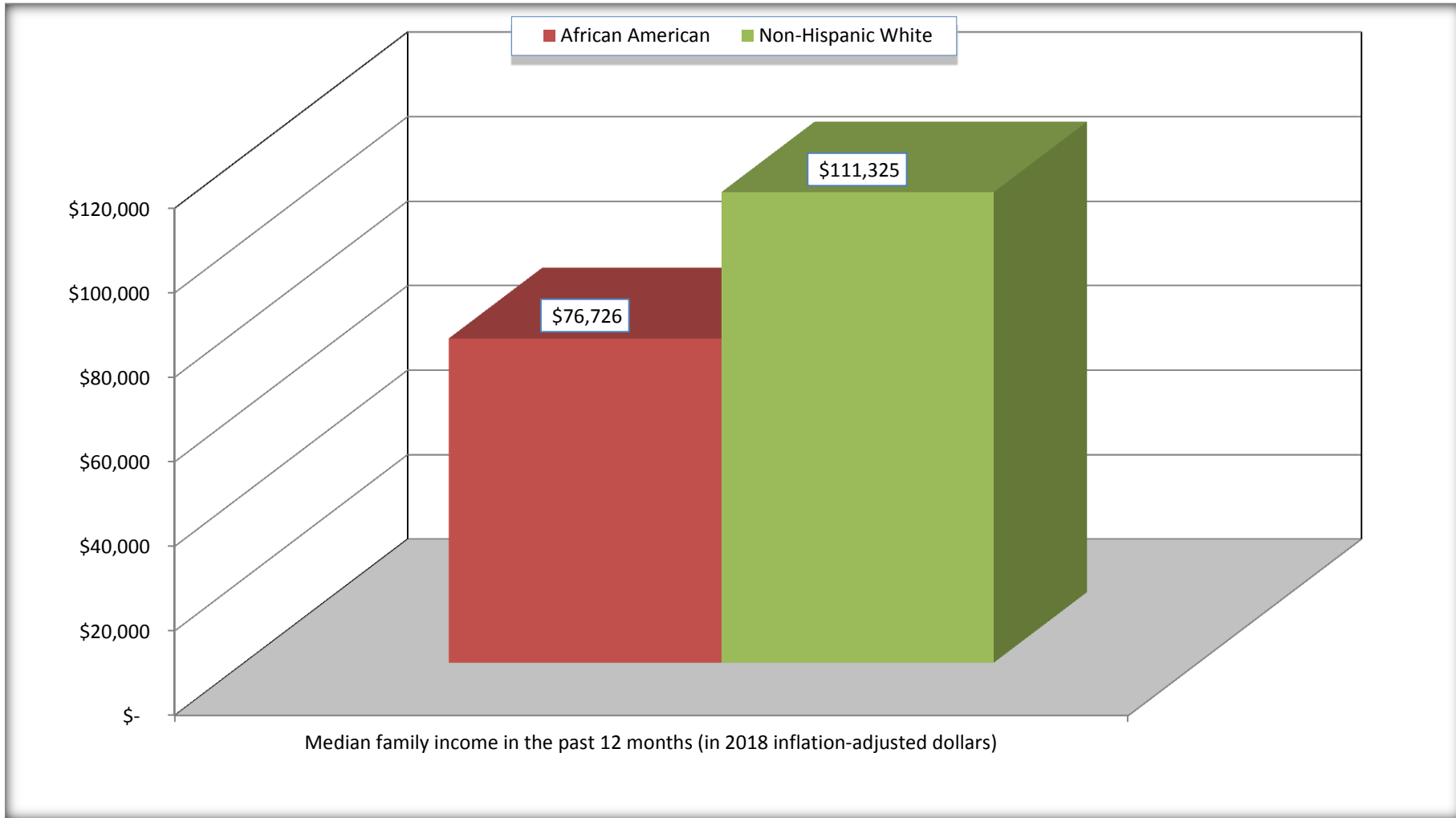
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Median Family Income in the Past 12 Months

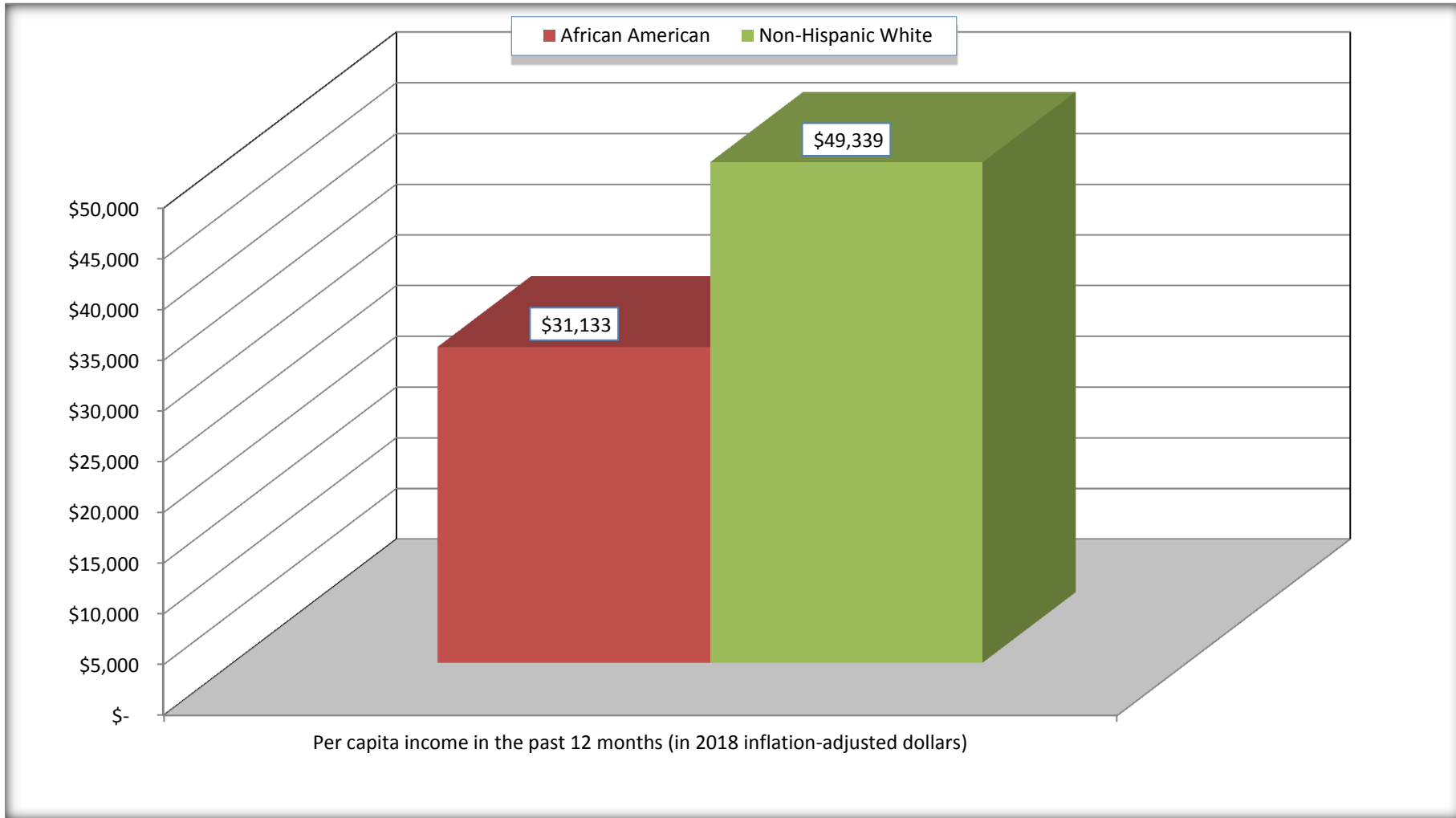
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Per capita Income in the Past 12 Months

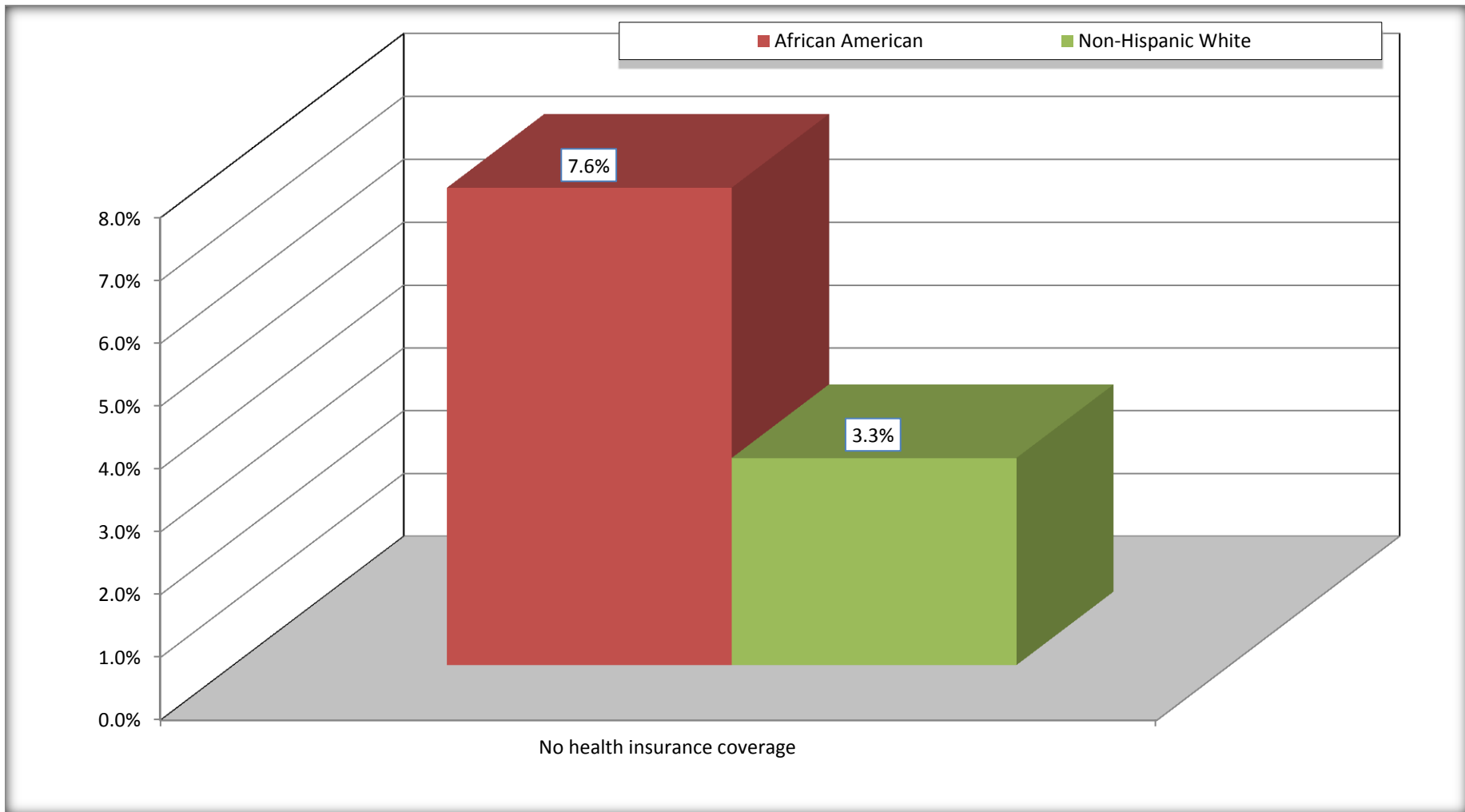
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Lack of Health Insurance Coverage -- Civilian Noninstitutionalized Population

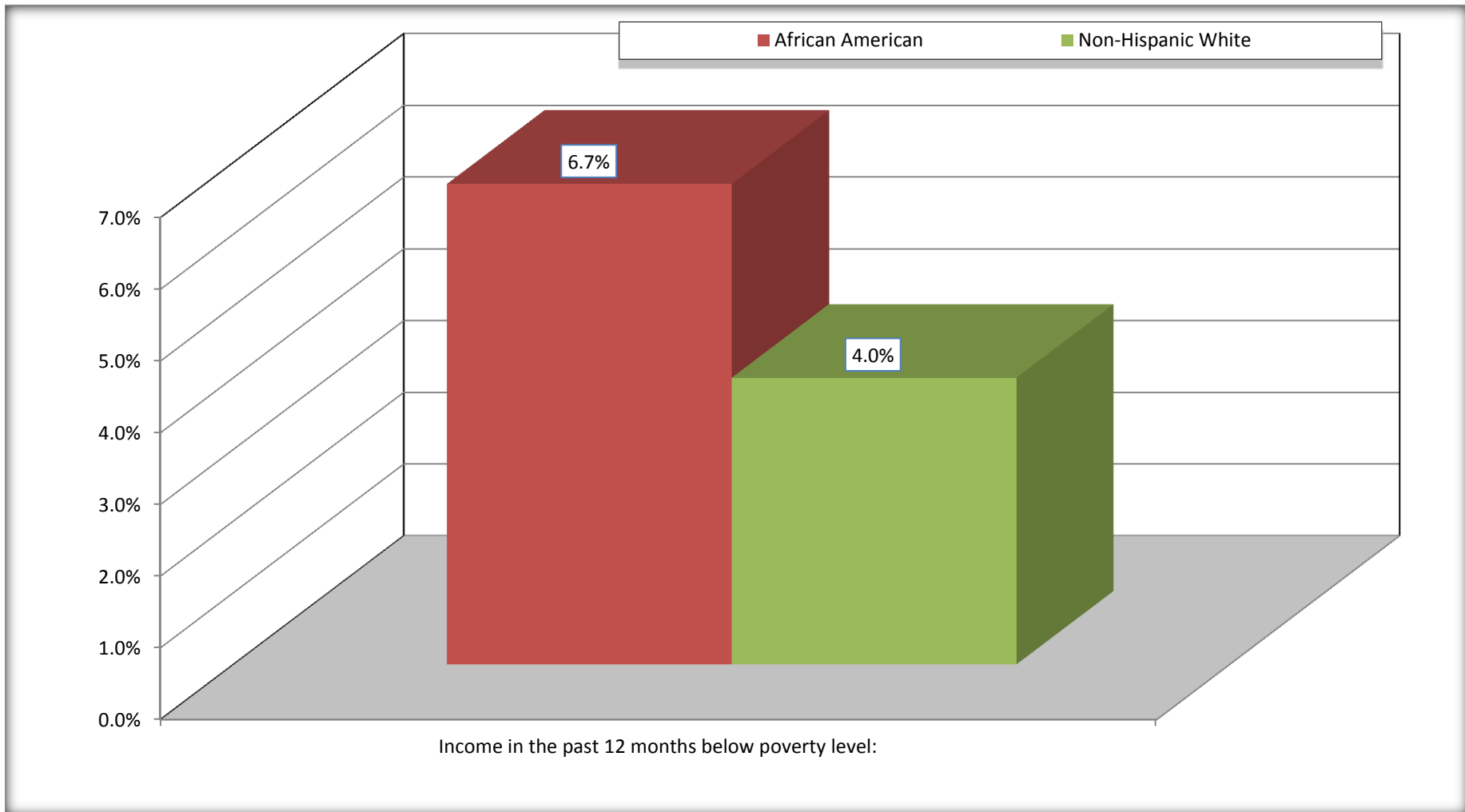
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

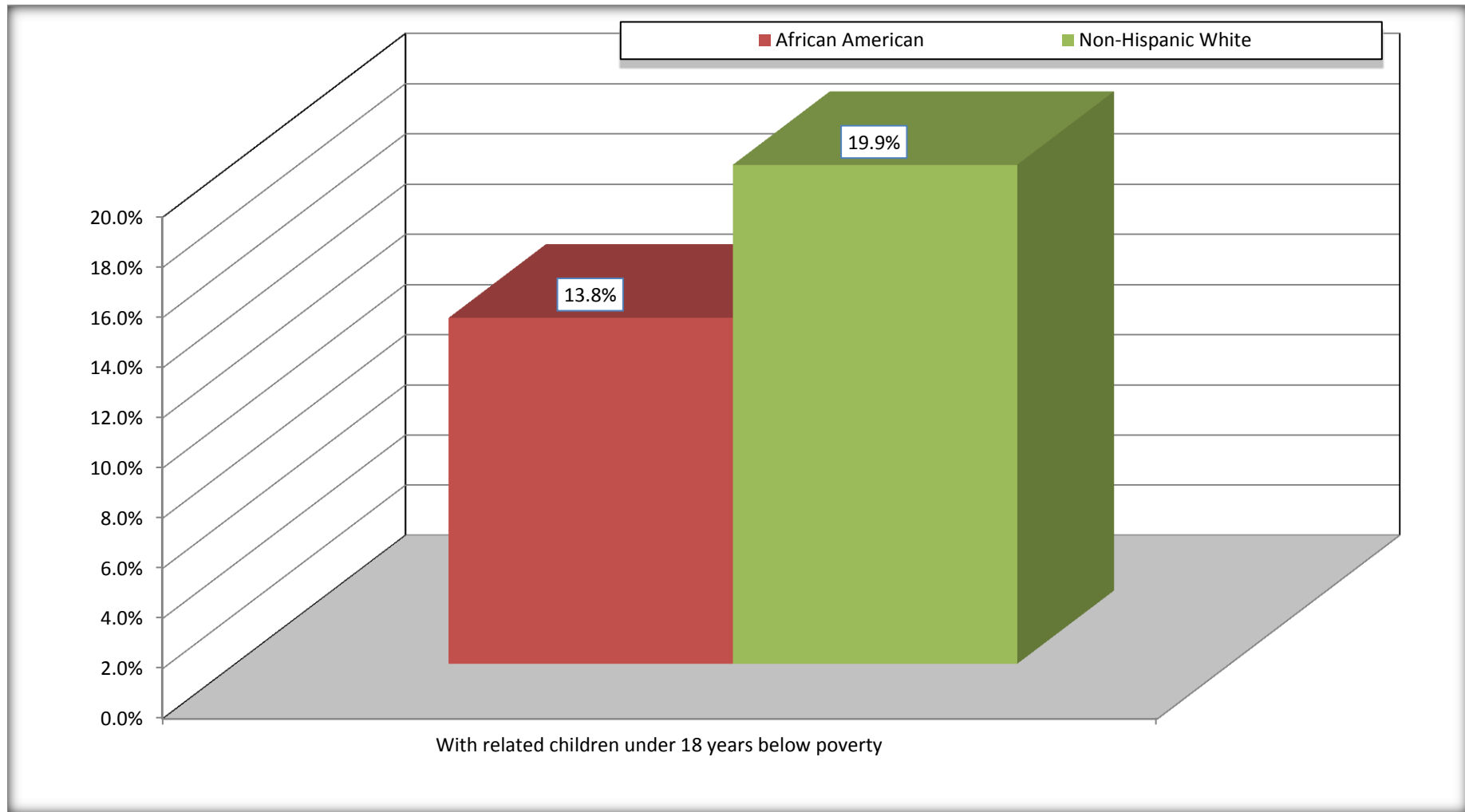
Family Households Below Poverty in the Past 12 Months

Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

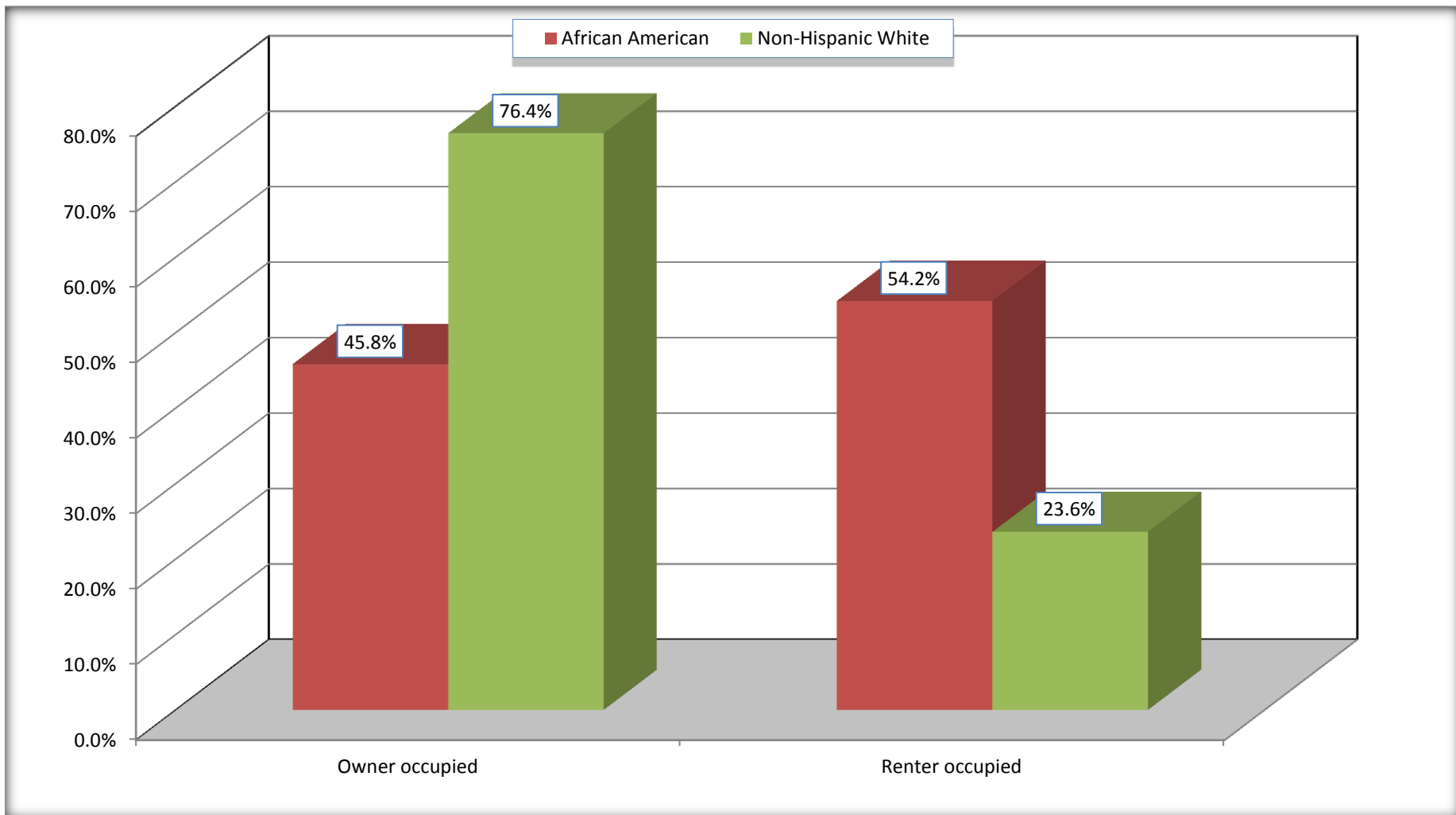
Female-headed Households with Related Children Below Poverty in the Past 12 Months
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Home Owners and Renters by Household

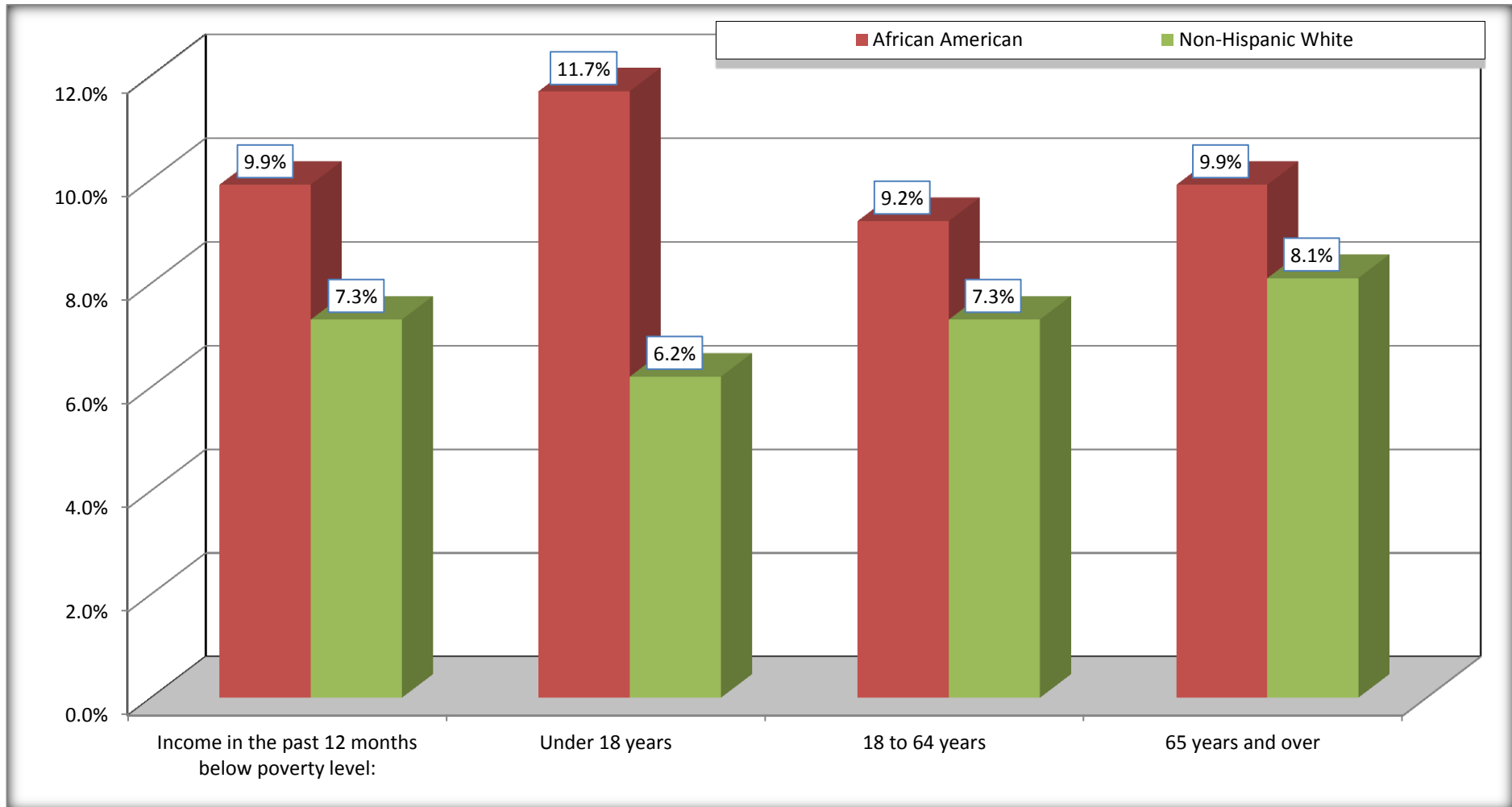
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Population Below Poverty in the Past 12 Months

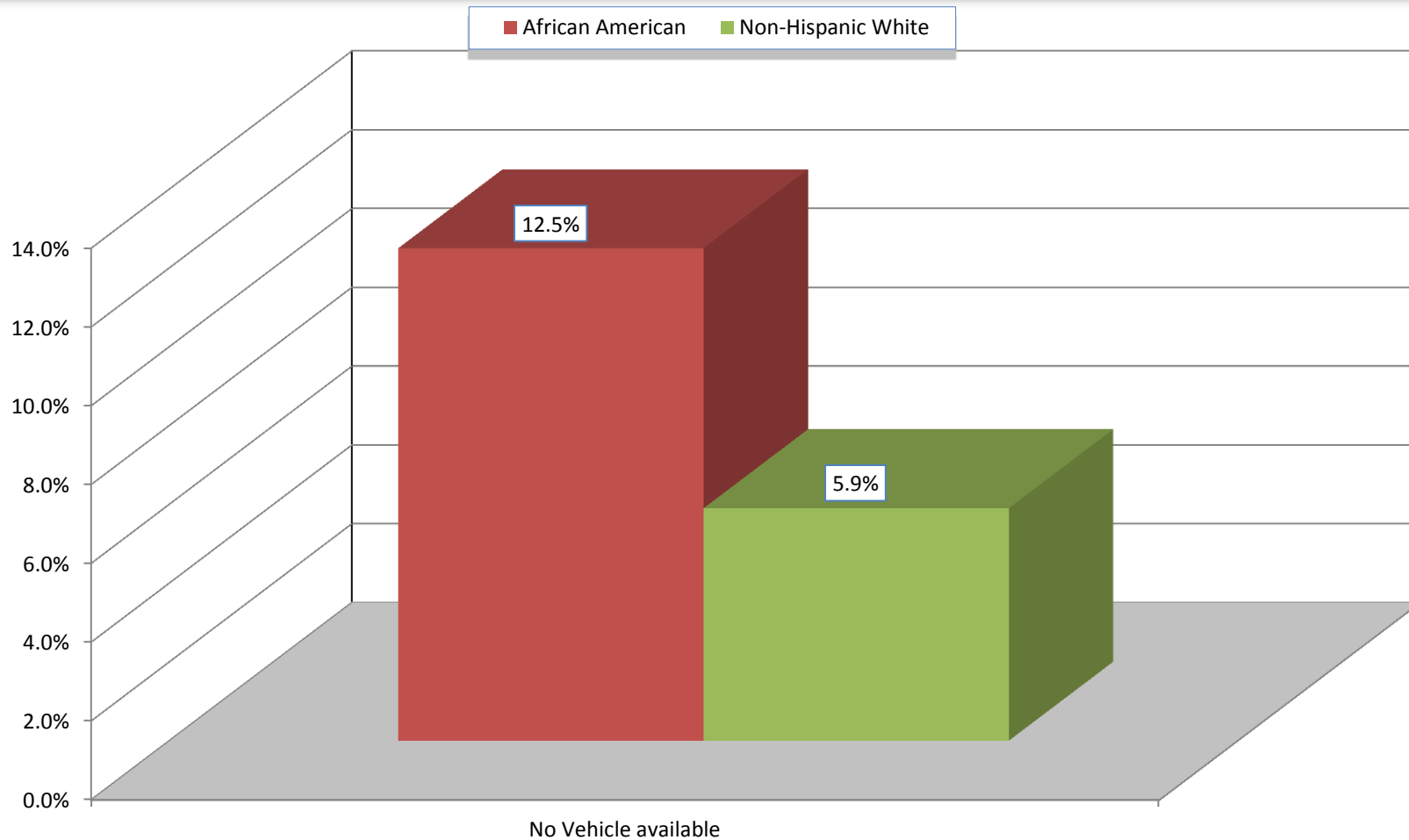
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

No Vehicles Available by Household

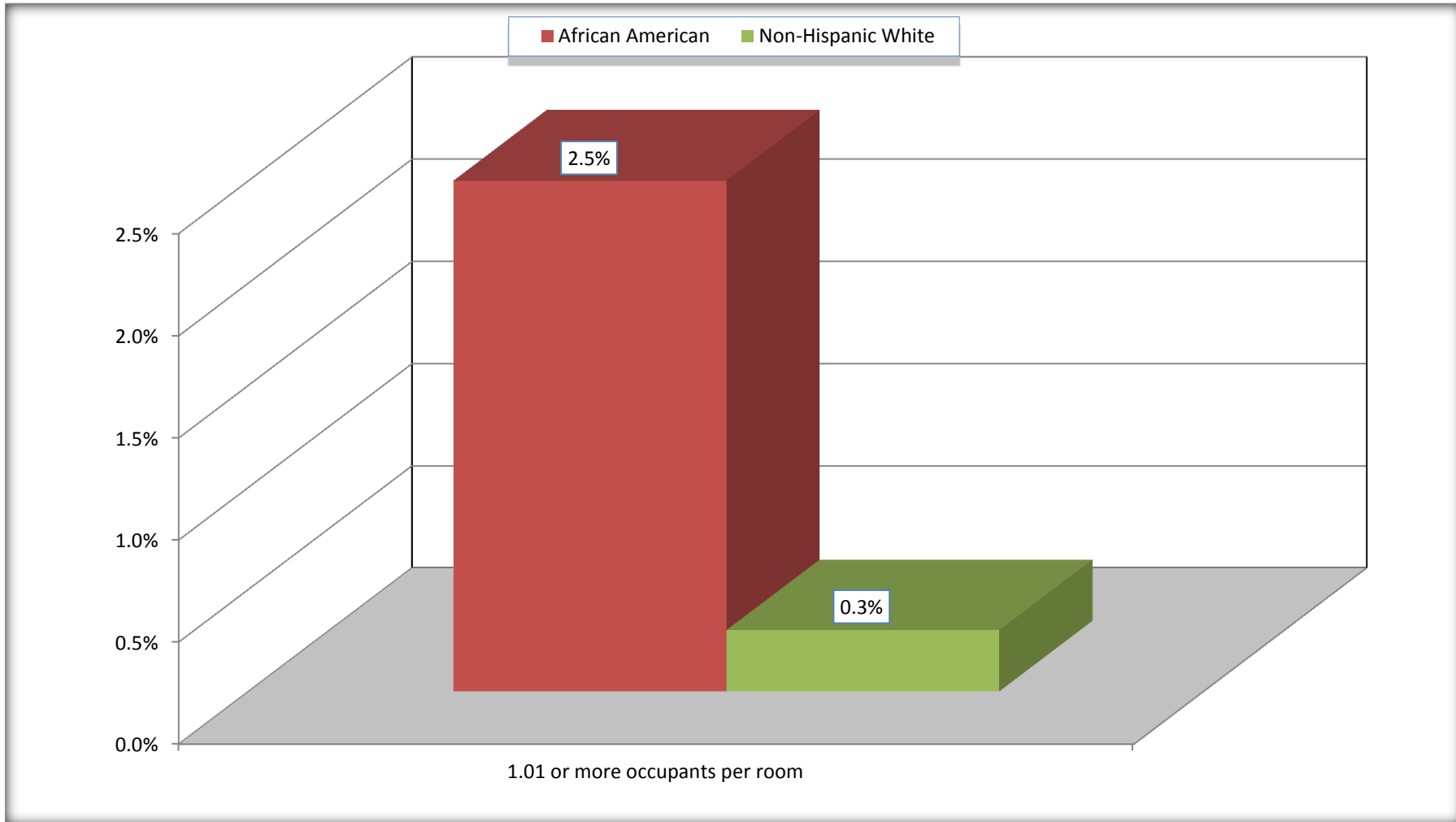
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

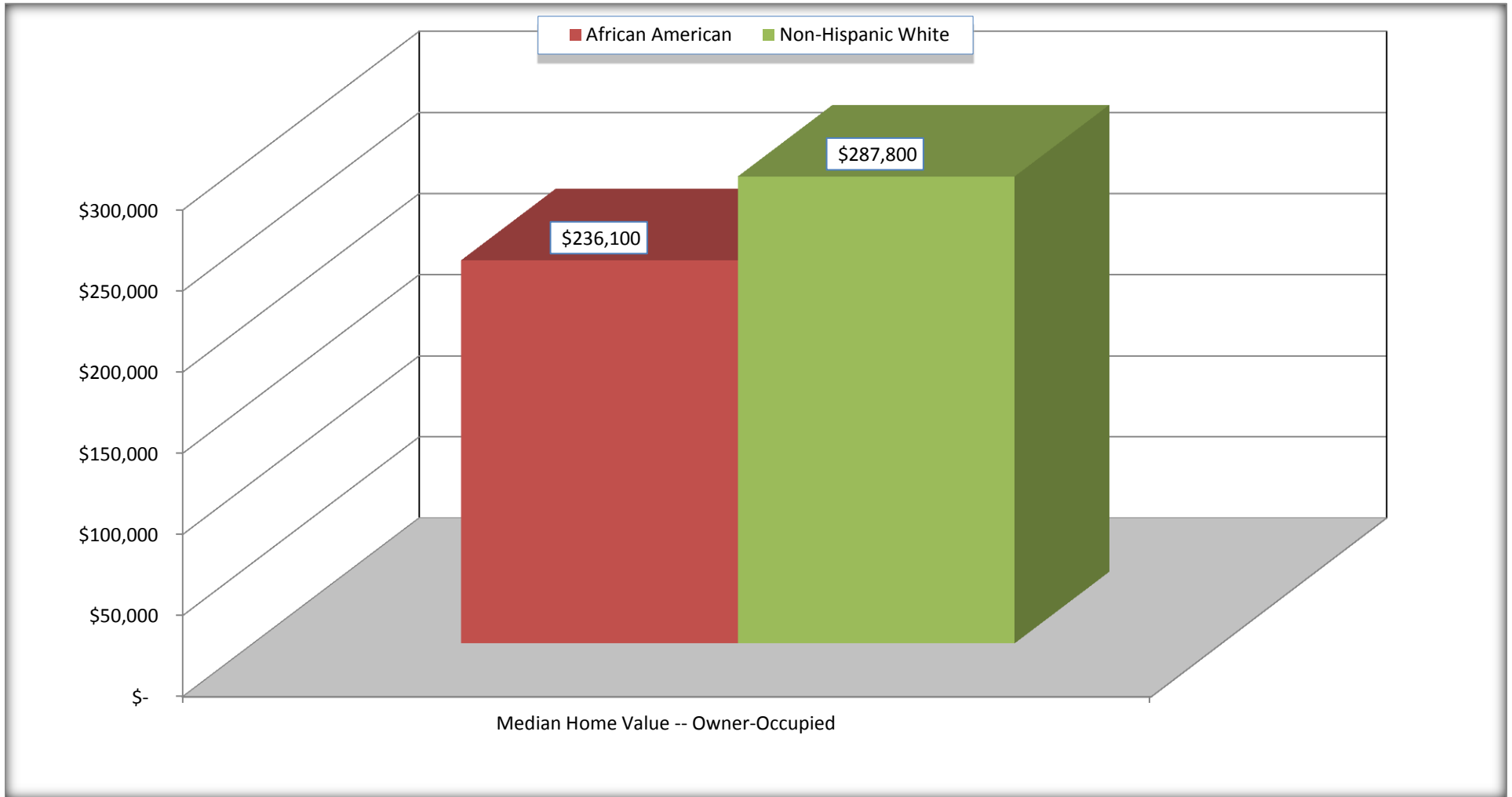
More than One Person per Room (Crowding) by Household

Baltimore County, Maryland



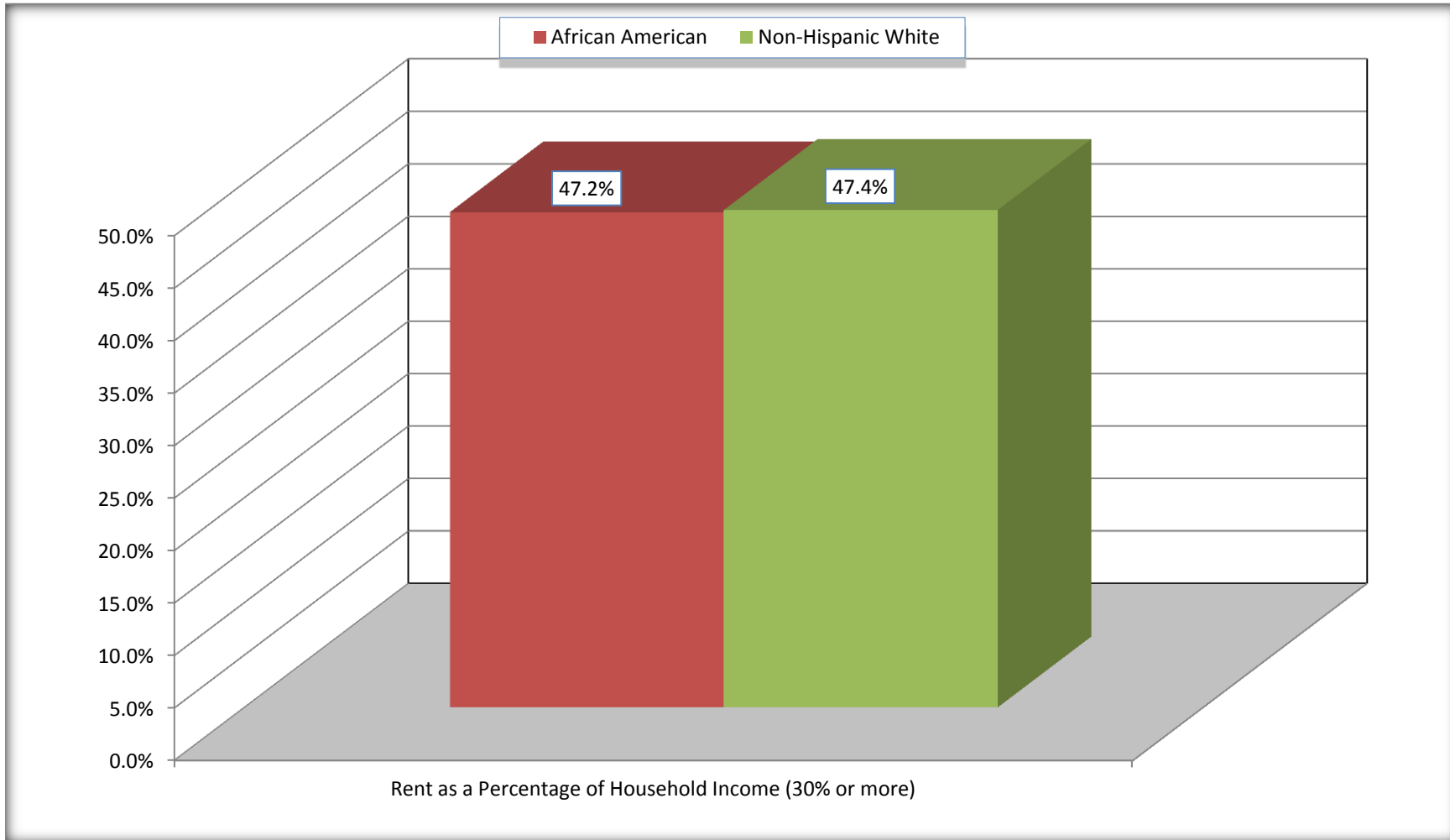
Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Median Home Value -- Owner-Occupied Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

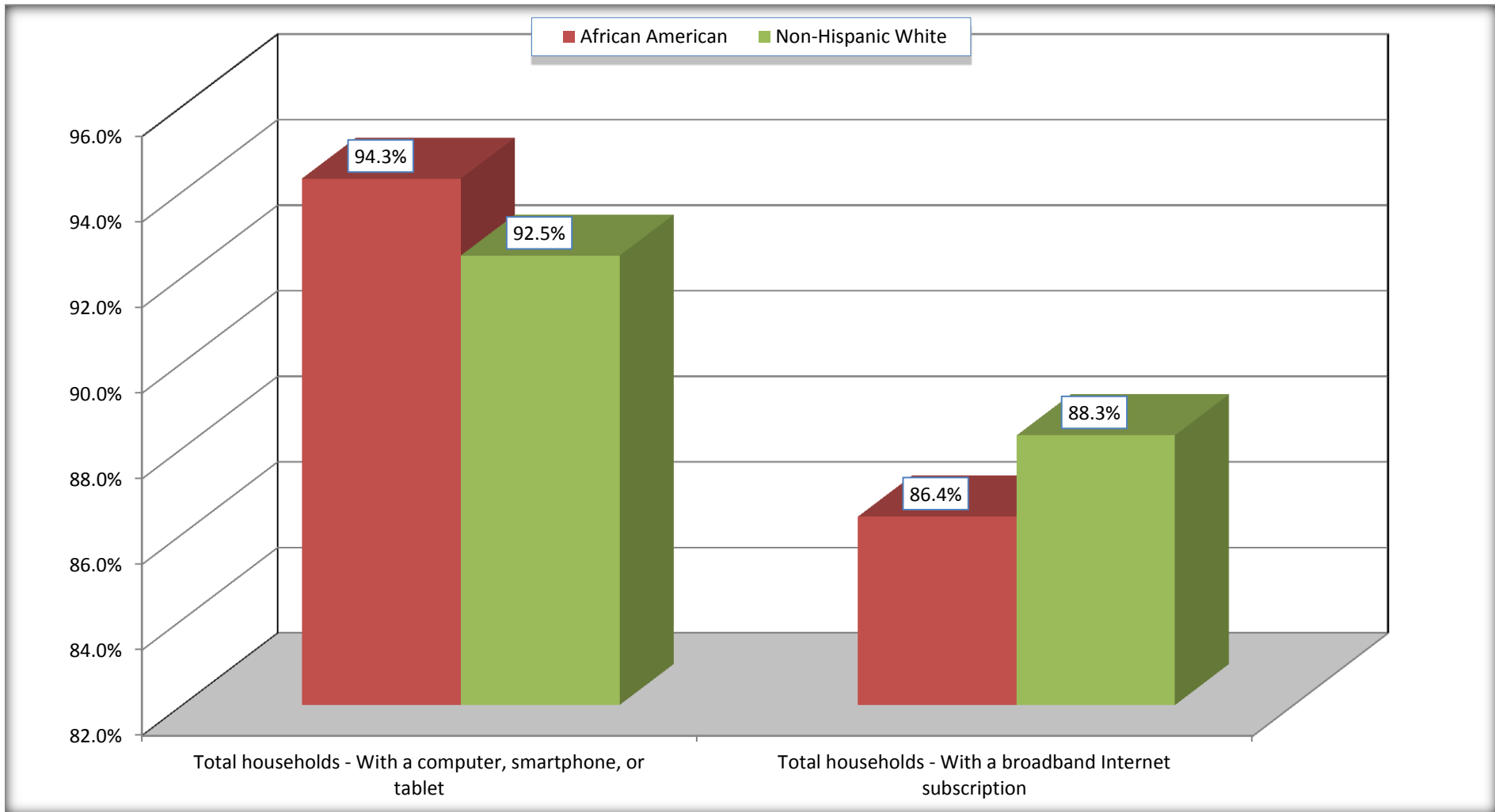
Rent as a Percentage of Household Income (30% or more) -- Renter-Occupied
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Computers and Internet Use

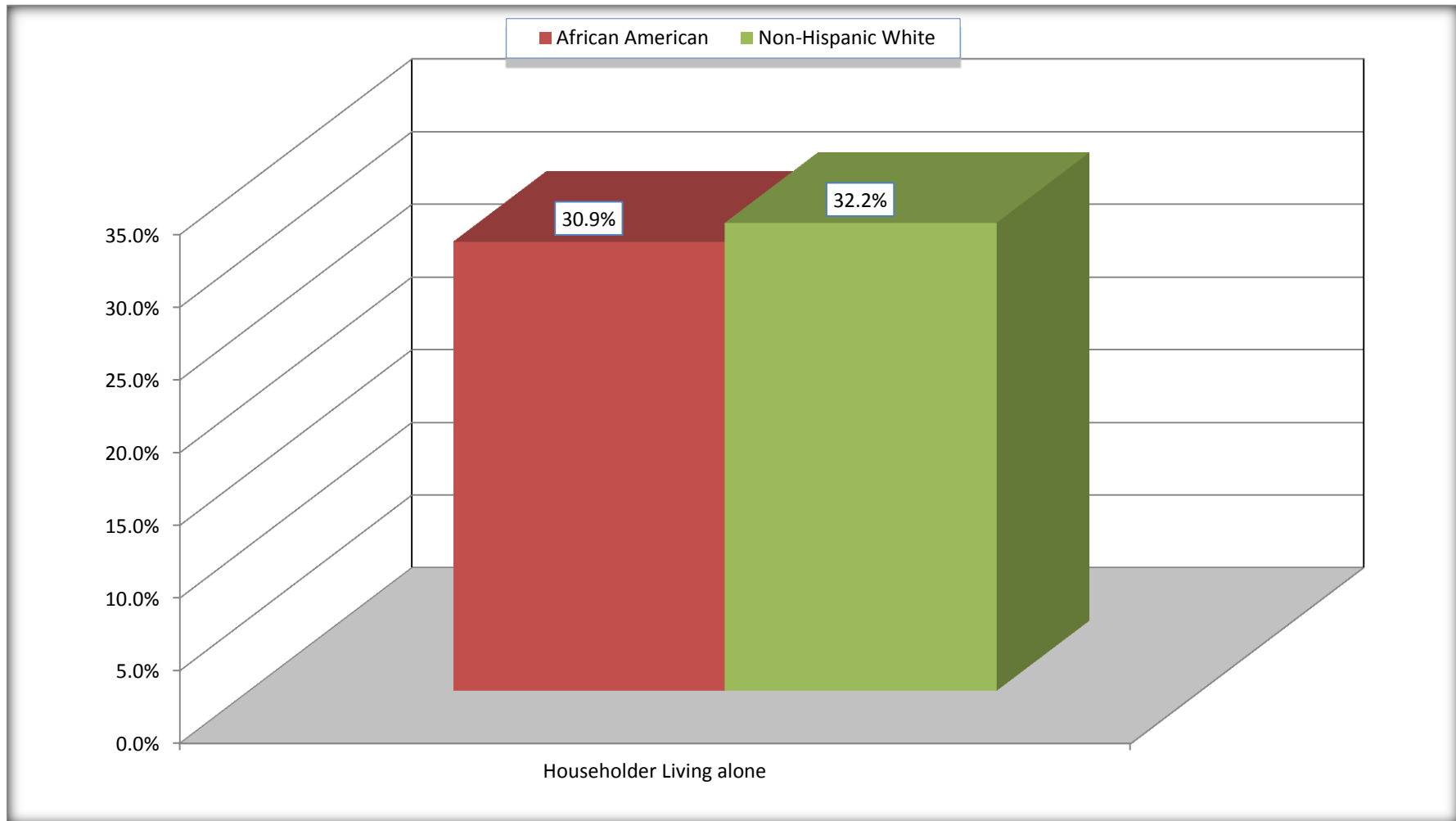
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Households with Householder Living Alone

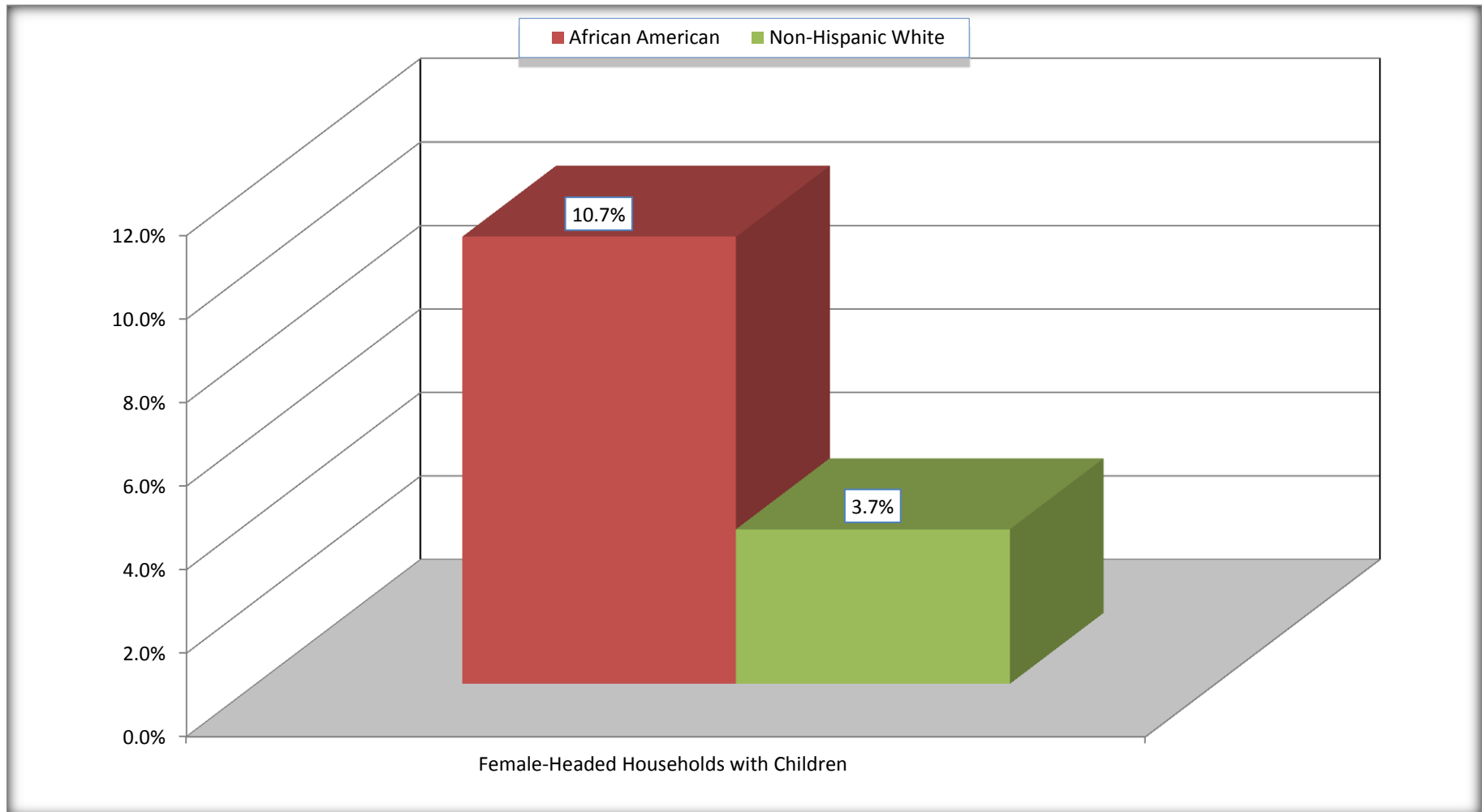
Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

Female-Headed Households with Children Under 18 (As a Percentage of all Households)

Baltimore County, Maryland



Source: S0201 SELECTED POPULATION PROFILE
Data Set: 2019 American Community Survey 1-Year Estimates

COOPER DECLARATION

EXHIBIT G-2

		Black or African American alone or in combination	White alone, not Hispanic or Latino
	All Persons Estimate	Estimate	Estimate
TOTAL NUMBER OF RACES REPORTED			
Total population	827,370	261,367	460,086
One race	97.3%	95.0%	100.0%
Two races	2.5%	4.4%	(X)
Three races	0.2%	0.5%	(X)
Four or more races	0.0%	0.0%	(X)
SEX AND AGE			
Total population	827,370	261,367	460,086
Male	47.4%	45.0%	47.9%
Female	52.6%	55.0%	52.1%
Under 5 years	5.9%	7.0%	4.6%
5 to 17 years	15.7%	19.1%	12.5%
18 to 24 years	8.7%	10.0%	7.8%
25 to 34 years	13.6%	15.2%	12.2%
35 to 44 years	12.4%	13.1%	11.2%
45 to 54 years	12.4%	12.9%	12.3%
55 to 64 years	13.7%	11.3%	16.2%
65 to 74 years	9.9%	7.3%	12.5%
75 years and over	7.6%	4.2%	10.7%
Median age (years)	39.5	34.3	46.7
18 years and over	78.4%	73.9%	82.9%
21 years and over	74.2%	68.8%	79.4%
62 years and over	22.1%	14.9%	28.7%
65 years and over	17.5%	11.4%	23.2%
Under 18 years	179,007	68,110	78,766
Male	51.3%	49.7%	51.4%
Female	48.7%	50.3%	48.6%
18 years and over	648,363	193,257	381,320
Male	46.4%	43.4%	47.2%
Female	53.6%	56.6%	52.8%
18 to 34 years	184,800	65,858	92,223
Male	48.9%	47.2%	49.6%
Female	51.1%	52.8%	50.4%
35 to 64 years	318,604	97,573	182,525
Male	46.9%	42.6%	48.5%
Female	53.1%	57.4%	51.5%

	Black or African American alone		White alone, or in combination not Hispanic or Latino
	All Persons		
	Estimate	Estimate	Estimate
65 years and over	144,959	29,826	106,572
Male	42.1%	37.6%	43.0%
Female	57.9%	62.4%	57.0%
RELATIONSHIP			
Population in households	806,877	253,350	449,149
Householder or spouse	55.8%	47.3%	62.6%
Unmarried partner	2.4%	2.9%	2.3%
Child	29.1%	33.9%	24.8%
Other relatives	9.6%	12.9%	7.0%
Other nonrelatives	3.1%	3.1%	3.3%
HOUSEHOLDS BY TYPE			
Households	312,466	91,767	189,875
Family households	63.5%	63.7%	61.9%
With own children of the householder under 18 years	24.1%	26.1%	20.6%
Married-couple family	44.2%	30.9%	48.4%
With own children of the householder under 18 years	16.0%	12.0%	15.4%
Female householder, no spouse present, family	14.2%	26.1%	9.2%
With own children of the householder under 18 years	6.0%	10.9%	3.7%
Nonfamily households	36.5%	36.3%	38.1%
Male householder	14.7%	13.4%	15.7%
Living alone	11.5%	10.8%	12.0%
Not living alone	3.3%	2.7%	3.7%
Female householder	21.8%	22.9%	22.4%
Living alone	19.2%	19.9%	20.2%
Not living alone	2.6%	2.9%	2.2%
Average household size	2.58	2.71	2.43
Average family size	3.27	3.44	3.09
MARITAL STATUS			
Population 15 years and over	678,240	204,798	395,508
Now married, except separated	45.6%	31.0%	50.8%
Widowed	6.5%	4.5%	8.4%
Divorced	10.3%	12.8%	9.9%
Separated	1.8%	2.3%	1.6%
Never married	35.9%	49.4%	29.4%
Male 15 years and over	316,840	89,657	187,489
Now married, except separated	49.4%	36.6%	53.7%

		Black or African American alone or in combination	White alone, not Hispanic or Latino
	All Persons Estimate	Estimate	Estimate
Widowed	2.8%	2.5%	3.2%
Divorced	8.5%	11.6%	8.1%
Separated	1.4%	1.3%	1.4%
Never married	37.9%	47.8%	33.6%
Female 15 years and over	361,400	115,141	208,019
Now married, except separated	42.3%	26.6%	48.2%
Widowed	9.7%	6.0%	13.0%
Divorced	11.8%	13.8%	11.5%
Separated	2.1%	3.0%	1.7%
Never married	34.1%	50.6%	25.6%
SCHOOL ENROLLMENT			
Population 3 years and over enrolled in school	208,441	78,032	95,738
Nursery school, preschool	6.6%	4.9%	7.6%
Kindergarten	4.3%	4.9%	3.7%
Elementary school (grades 1-8)	38.9%	38.2%	37.9%
High school (grades 9-12)	17.9%	18.3%	17.8%
College or graduate school	32.2%	33.8%	33.0%
Male 3 years and over enrolled in school	100,815	36,318	47,497
Percent enrolled in kindergarten to grade 12	65.6%	68.5%	61.3%
Percent enrolled in college or graduate school	27.1%	25.6%	30.8%
Female 3 years and over enrolled in school	107,626	41,714	48,241
Percent enrolled in kindergarten to grade 12	57.1%	55.0%	57.6%
Percent enrolled in college or graduate school	37.0%	41.0%	35.1%
EDUCATIONAL ATTAINMENT			
Population 25 years and over	575,977	167,029	345,288
Less than high school diploma	7.9%	7.5%	6.6%
High school graduate (includes equivalency)	25.5%	26.7%	25.5%
Some college or associate's degree	25.8%	32.4%	24.0%
Bachelor's degree	23.3%	19.9%	24.9%
Graduate or professional degree	17.5%	13.5%	18.9%
High school graduate or higher	92.1%	92.5%	93.4%
Male, high school graduate or higher	92.2%	93.9%	92.9%
Female, high school graduate or higher	91.9%	91.4%	93.8%
Bachelor's degree or higher	40.8%	33.4%	43.8%
Male, bachelor's degree or higher	40.5%	28.8%	45.0%
Female, bachelor's degree or higher	41.1%	36.8%	42.8%

	Black or African American alone or in combination		White alone, not Hispanic or Latino
All Persons	Estimate	Estimate	Estimate
FERTILITY			
Women 15 to 50 years	195,610	72,420	95,958
Women 15 to 50 years who had a birth in the past 12 months	8,212	3,247	3,829
Unmarried women 15 to 50 years who had a birth in the past 12 months	1,986	1,393	559
As a percent of all women with a birth in the past 12 months	24.2%	42.9%	14.6%
RESPONSIBILITY FOR GRANDCHILDREN UNDER 18 YEARS			
Population 30 years and over	520,238	146,374	317,956
Grandparents living with grandchild(ren)	3.3%	4.0%	2.6%
Grandparents responsible for grandchildren as a percentage of living with grandchildren	31.9%	36.4%	28.4%
VETERAN STATUS			
Civilian population 18 years and over	647,940	193,154	381,000
Civilian veteran	5.8%	6.0%	6.3%
DISABILITY STATUS			
Total civilian noninstitutionalized population	819,674	258,066	455,897
With a disability	11.8%	10.5%	13.6%
Civilian noninstitutionalized population under 18 years	178,467	67,801	78,542
With a disability	4.1%	4.9%	4.3%
Civilian noninstitutionalized population 18 to 64 years	500,487	161,422	273,891
With a disability	9.0%	9.0%	9.5%
Civilian noninstitutionalized population 65 years and older	140,720	28,843	103,464
With a disability	31.2%	31.9%	31.4%
RESIDENCE 1 YEAR AGO			
Population 1 year and over	818,209	257,779	456,256
Same house	88.6%	86.6%	90.9%
Different house in the U.S.	10.8%	12.0%	8.9%
Same county	5.5%	5.6%	4.4%
Different county	5.3%	6.4%	4.6%
Same state	4.2%	5.1%	3.5%
Different state	1.1%	1.3%	1.1%
Abroad	0.6%	1.4%	0.2%
PLACE OF BIRTH, CITIZENSHIP STATUS AND YEAR OF ENTRY			
Native	721,658	228,995	441,451
Male	47.5%	45.2%	48.0%
Female	52.5%	54.8%	52.0%
Foreign born	105,712	32,372	18,635
Male	46.7%	43.6%	45.0%

	Black or African American alone or in combination		White alone, not Hispanic or Latino
All Persons	Estimate	Estimate	Estimate
Female	53.3%	56.4%	55.0%
Foreign born; naturalized U.S. citizen	58,924	16,805	12,961
Male	47.3%	45.9%	45.2%
Female	52.7%	54.1%	54.8%
Foreign born; not a U.S. citizen	46,788	15,567	5,674
Male	46.0%	41.0%	44.6%
Female	54.0%	59.0%	55.4%
Population born outside the United States	105,712	32,372	18,635
Entered 2010 or later	36.6%	46.4%	17.5%
Entered 2000 to 2009	25.5%	26.1%	15.1%
Entered before 2000	37.9%	27.4%	67.4%
WORLD REGION OF BIRTH OF FOREIGN BORN			
Foreign-born population excluding population born at sea	105,712	32,372	18,635
Europe	11.4%	N	54.9%
Asia	39.0%	N	19.8%
Africa	25.5%	N	8.6%
Oceania	0.0%	N	0.2%
Latin America	22.9%	N	10.1%
Northern America	1.2%	N	6.4%
LANGUAGE SPOKEN AT HOME AND ABILITY TO SPEAK ENGLISH			
Population 5 years and over	778,496	243,114	438,944
English only	84.4%	87.3%	94.1%
Language other than English	15.6%	12.7%	5.9%
Speak English less than "very well"	5.1%	2.8%	2.0%
EMPLOYMENT STATUS			
Population 16 years and over	667,977	201,064	390,452
In labor force	66.9%	71.8%	63.4%
Civilian labor force	66.8%	71.8%	63.4%
Employed	64.0%	67.3%	61.3%
Unemployed	2.8%	4.4%	2.1%
Unemployment Rate	4.2%	6.2%	3.3%
Armed Forces	0.1%	0.1%	0.1%
Not in labor force	33.1%	28.2%	36.6%
Females 16 years and over	356,755	113,149	205,905
In labor force	62.9%	71.1%	58.9%
Civilian labor force	62.9%	71.1%	58.9%

	Black or African American alone or in combination		White alone, not Hispanic or Latino
All Persons	Estimate	Estimate	Estimate
Employed	60.4%	66.9%	57.2%
Unemployed	2.5%	4.2%	1.6%
Unemployment Rate	3.9%	5.9%	2.8%
COMMUTING TO WORK			
Workers 16 years and over	420,281	131,664	236,500
Car, truck, or van - drove alone	79.4%	73.9%	82.3%
Car, truck, or van - carpooled	8.5%	9.6%	7.7%
Public transportation (excluding taxicab)	4.5%	10.0%	1.7%
Walked	1.2%	1.0%	1.3%
Other means	1.8%	3.3%	0.8%
Worked from home	4.5%	2.2%	6.1%
Mean travel time to work (minutes)	30.1	32.6	29.5
OCCUPATION			
Civilian employed population 16 years and over	427,632	135,403	239,249
Management, business, science, and arts occupations	45.9%	37.8%	51.0%
Service occupations	17.0%	22.7%	12.7%
Sales and office occupations	20.4%	20.5%	21.0%
Natural resources, construction, and maintenance occupations	5.9%	3.9%	6.6%
Production, transportation, and material moving occupations	10.8%	15.2%	8.7%
Male civilian employed population 16 years and over	212,114	59,674	121,431
Management, business, science, and arts occupations	41.3%	28.2%	48.2%
Service occupations	15.6%	22.9%	10.5%
Sales and office occupations	15.4%	13.1%	16.6%
Natural resources, construction, and maintenance occupations	11.4%	8.9%	12.5%
Production, transportation, and material moving occupations	16.4%	26.9%	12.2%
Female civilian employed population 16 years and over	215,518	75,729	117,818
Management, business, science, and arts occupations	50.4%	45.3%	53.9%
Service occupations	18.4%	22.5%	14.9%
Sales and office occupations	25.2%	26.3%	25.5%
Natural resources, construction, and maintenance occupations	0.6%	0.0%	0.6%
Production, transportation, and material moving occupations	5.4%	5.9%	5.2%
INDUSTRY			
Civilian employed population 16 years and over	427,632	135,403	239,249
Agriculture, forestry, fishing and hunting, and mining	0.4%	0.1%	0.3%
Construction	5.3%	3.3%	6.0%
Manufacturing	4.9%	3.1%	5.8%

		Black or African American alone or in combination	White alone, not Hispanic or Latino
	All Persons Estimate	Estimate	Estimate
Wholesale trade	2.3%	0.9%	3.4%
Retail trade	9.5%	9.7%	9.8%
Transportation and warehousing, and utilities	5.3%	9.7%	2.9%
Information	1.4%	1.1%	1.7%
Finance and insurance, and real estate and rental and leasing	7.5%	6.3%	8.9%
Professional, scientific, and management, and administrative and waste manageme	13.1%	10.5%	14.1%
Educational services, and health care and social assistance	27.8%	31.8%	26.6%
Arts, entertainment, and recreation, and accommodation and food services	9.1%	7.9%	8.7%
Other services (except public administration)	5.4%	4.8%	5.2%
Public administration	8.0%	10.7%	6.6%
CLASS OF WORKER			
Civilian employed population 16 years and over	427,632	135,403	239,249
Private wage and salary workers	76.3%	70.4%	78.8%
Government workers	18.3%	23.6%	16.0%
Self-employed workers in own not incorporated business	5.3%	5.9%	5.1%
Unpaid family workers	0.1%	0.1%	0.1%
INCOME IN THE PAST 12 MONTHS (IN 2019 INFLATION-ADJUSTED DOLLARS)			
Households	312,466	91,767	189,875
Median household income (dollars)	77,358	67,020	85,929
With earnings	79.0%	85.3%	73.9%
Mean earnings (dollars)	104,742	83,602	118,158
With Social Security income	32.6%	25.3%	38.9%
Mean Social Security income (dollars)	20,191	15,415	21,880
With Supplemental Security Income	4.5%	4.8%	4.1%
Mean Supplemental Security Income (dollars)	10,120	8,664	11,743
With cash public assistance income	1.8%	2.9%	1.2%
Mean cash public assistance income (dollars)	3,242	1,053	6,009
With retirement income	28.2%	26.3%	32.2%
Mean retirement income (dollars)	30,748	24,607	32,591
With Food Stamp/SNAP benefits	9.3%	15.1%	5.7%
Families	198,368	58,447	117,544
Median family income (dollars)	96,502	75,768	111,325
Married-couple family	69.6%	48.6%	78.1%
Median income (dollars)	116,775	103,689	126,323
Male householder, no spouse present, family	7.9%	10.4%	6.9%
Median income (dollars)	70,266	71,207	73,206

	Black or African American alone or in combination		White alone, not Hispanic or Latino
All Persons	Estimate	Estimate	Estimate
Female householder, no husband present, family	22.4%	41.0%	14.9%
Median income (dollars)	60,156	58,596	63,102
Individuals	827,370	261,367	460,086
Per capita income (dollars)	41,370	30,975	49,339
With earnings for full-time, year-round workers:			
Male	169,664	47,769	98,247
Female	143,534	53,050	77,002
Mean earnings (dollars) for full-time, year-round workers:			
Male	83,275	57,849	98,619
Female	65,384	58,879	68,300
Median earnings (dollars) full-time, year-round workers:			
Male	60,516	47,299	69,499
Female	53,349	48,832	58,364
HEALTH INSURANCE COVERAGE			
Civilian noninstitutionalized population	819,674	258,066	455,897
With private health insurance	74.7%	71.7%	79.4%
With public coverage	34.6%	33.0%	35.3%
No health insurance coverage	5.8%	7.6%	3.3%
POVERTY RATES FOR FAMILIES AND PEOPLE FOR WHOM POVERTY STATUS IS DETERMINED			
All families	6.0%	7.3%	4.0%
With related children of the householder under 18 years	9.8%	11.4%	6.5%
With related children of the householder under 5 years only	7.1%	N	8.1%
Married-couple family	3.3%	4.1%	2.2%
With related children of the householder under 18 years	3.9%	6.0%	1.7%
With related children of the householder under 5 years only	N	N	N
Female householder, no spouse present, family	12.6%	11.1%	11.7%
With related children of the householder under 18 years	19.3%	16.0%	19.9%
With related children of the householder under 5 years only	21.2%	N	33.9%
All people	8.9%	10.2%	7.3%
Under 18 years	10.6%	11.9%	6.2%
Related children of the householder under 18 years	10.3%	11.6%	5.9%
Related children of the householder under 5 years	8.4%	6.7%	8.3%
Related children of the householder 5 to 17 years	11.1%	13.4%	5.0%
18 years and over	8.5%	9.6%	7.5%
18 to 64 years	8.3%	9.5%	7.3%
65 years and over	9.0%	10.1%	8.1%

	Black or African American alone		White alone, or in combination not Hispanic or Latino
	All Persons		
	Estimate	Estimate	Estimate
People in families	6.2%	8.1%	3.7%
Unrelated individuals 15 years and over	20.0%	19.3%	20.3%
HOUSING TENURE			
Occupied housing units	312,466	91,767	189,875
Owner-occupied housing units	65.6%	45.5%	76.4%
Renter-occupied housing units	34.4%	54.5%	23.6%
Average household size of owner-occupied unit	2.64	2.86	2.51
Average household size of renter-occupied unit	2.47	2.58	2.17
UNITS IN STRUCTURE			
Occupied housing units	312,466	91,767	189,875
1-unit, detached or attached	70.1%	58.6%	75.9%
2 to 4 units	3.4%	4.4%	2.6%
5 or more units	25.8%	36.8%	20.7%
Mobile home, boat, RV, van, etc.	0.6%	0.2%	0.8%
YEAR STRUCTURE BUILT			
Occupied housing units	312,466	91,767	189,875
Built 2014 or later	2.7%	3.5%	2.2%
Built 2010 to 2013	1.5%	1.2%	1.5%
Built 2000 to 2009	8.4%	9.7%	7.2%
Built 1980 to 1999	27.7%	29.8%	27.0%
Built 1960 to 1979	25.7%	28.7%	23.4%
Built 1940 to 1959	26.1%	22.1%	29.0%
Built 1939 or earlier	7.9%	5.0%	9.6%
VEHICLES AVAILABLE			
Occupied housing units	312,466	91,767	189,875
None	8.0%	12.3%	5.9%
1 or more	92.0%	87.7%	94.1%
HOUSE HEATING FUEL			
Occupied housing units	312,466	91,767	189,875
Gas	57.1%	57.2%	57.4%
Electricity	34.1%	39.0%	31.1%
All other fuels	8.2%	2.9%	11.2%
No fuel used	0.5%	0.9%	0.3%
SELECTED CHARACTERISTICS			
Occupied housing units	312,466	91,767	189,875
No telephone service available	1.1%	1.8%	0.8%

	All Persons	Black or African American alone or in combination	White alone, not Hispanic or Latino
	Estimate	Estimate	Estimate
1.01 or more occupants per room	1.7%	2.4%	0.3%
SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN THE PAST 12 MONTHS			
Housing units with a mortgage (excluding units where SMOC cannot be computed)	138,414	35,175	89,785
Less than 30 percent	73.4%	65.9%	77.6%
30 percent or more	26.6%	34.1%	22.4%
OWNER CHARACTERISTICS			
Owner-occupied housing units	204,824	41,757	145,113
Median value (dollars)	274,600	236,100	287,800
Median selected monthly owner costs with a mortgage (dollars)	1,768	1,651	1,817
Median selected monthly owner costs without a mortgage (dollars)	583	539	586
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN THE PAST 12 MONTHS			
Occupied units paying rent (excluding units where GRAP cannot be computed)	103,065	48,577	42,488
Less than 30 percent	52.1%	52.5%	52.6%
30 percent or more	47.9%	47.5%	47.4%
GROSS RENT			
Occupied units paying rent	104,618	49,198	43,273
Median gross rent (dollars)	1,326	1,304	1,368
COMPUTERS AND INTERNET USE			
Total households	312,466	91,767	189,875
With a computer	93.3%	94.2%	92.5%
With a broadband Internet subscription	88.1%	86.2%	88.3%

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